Biotechnology and Bioengineering

Author Index to Volumes 43 and 44

Please note that A refers to Volume 43 and B refers to Volume 44

Acuña, G.
—; Latrille, E.; Béal, C.; Corrieu, G.; Cheruy, A.: On-Line Estimation of Biological Variables During pH Controlled Lactic Acid Fermentations, 1168B
Adlercreutz, P. See Otamiri, M., 987A
—; See Otamiri, M., 73B
—; See Svensson, I., 549B
Aebischer, P. See Bellamkonda, R., 543A
Affleck, R.
—; Clark, D. S.; Kamat, S.; Russell, A. J.: High Pressure EPR Studies of Protein Mobility in Reversed Micelles, 342A
—; See Xu, Z.-F., 515A
Al-Rubeai, M. See Singh, R. P., 720B
Aldrich, H. C. See Doran, J. B., 240B
Allen, L. See Halberstadt, C. R., 740A
Amos, K. M. See Petersen, J. N., 521A
Andrews, A. T.
—; Noble, I.; Keeratipibul, S.; Asenjo, J. A.: Physicochemical Properties of the Matrix Proteins of Three Main Culture Vehicles, 29B
Andrews, B. A.
—; Pyle, D. L.; Asenjo, J. A.: The Effects of pH and Ionic Strength on the Partitioning of Four Proteins in Reverse Micelle Systems, 1052A
Araki, N. See Noguera, D. R., 1040B
Archambault, J.
—; Williams, R. D.; Lavoie, L.; Pépin, M.-F.; Chavarie, C.: Production of Somatic Embryos in a Helical Ribbon Impeller Bioreactor, 930B
Aristidou, A. A.
—; San, K.-Y.; Bennett, G. N.: Modification of Central Metabolic Pathway in *Escherichia coli* to Reduce Acetate Accumulation by Heterologous Expression of the *Bacillus subtilis* Acetolactate Synthase Gene, 944B
Arts, P. A. M. See Gjaltema, A., 194B
Asai, S. See Konishi, Y., 667B
Asenjo, J. A. See Andrews, B. A., 1052A
—; See Andrews, A. T., 29B
—; See Regalado, C., 674B
Atanasov, P.
—; Wilkins, E.: Biosensor for Continuous Glucose Monitoring, 262A
Athavale, S. See Shoichet, M. S., 563A
Aunins, J. See Junker, B. H., 1315B
Austin, G. D.
—; Watson, R. W. J.; D'Amore, T.: Studies of On-Line Viable Yeast Biomass with a Capacitance Biomass Monitor, 337A
Avila, I. See De Cordt, S., 859B
Awrey, D. E. See Chang, P. L., 925A
Axe, D. D.
—; Bailey, J. E.: Modeling the Regulation of Bacterial Genes Producing Proteins that Strongly Influence Growth, 242A
Babbitt, B. See Hamilton, D., 700A
Bae, Y. H. See Yang, Y., 207A
Bailey, F. J. See Junker, B. H., 539B
Bailey, J. E. See Axe, D. D., 242A
—; See Chen, W., 1190A
—; See Dedhia, N. N., 132B
—; See Pendse, G. J., 1367B
Bakir, U. See Chen, H.-m., 101A
Baldwin, C. V.
—; Robinson, C. W.: Enhanced Disruption of *Candida utilis* Using Enzymatic Pretreatment and High-Pressure Homogenization, 46A
Baltzis, B. C. See Oh, Y.-S., 533B
Bambot, S. B.
—; Holavanahali, R.; Lakowicz, J. R.; Carter, G. M.; Rao, G.: Phase Fluorometric Sterilizable Optical Oxygen Sensor, 1139A
Baptista, A. See Pires, M. J., 773B
Barlett, R. T. See Meagher, M. M., 969A
Barmin, A. V.
—; Eremenko, A. V.; Kurochkin, I. N.; Moskvitina, T. A.: New Catalytic Properties of Monoamine Oxidase Immobilized in Langmuir–Blodgett Films with Amphiphilic Polyelectrolytes, 849B
Barnabé, N.
—; Butler, M.: Effect of Temperature on Nucleotide Pools and Monoclonal Antibody Production in a Mouse Hybridoma, 1235B
Barreiros, S. See Martins, J. F., 119B
Bartha, R. See Oh, Y.-S., 533B
Baumgärtl, H. See Müller, W., 617B
Bautista, J. See Hernandez-Pinzon, I., 270B
Béal, C. See Acuña, G., 1168B
Beeton, S. See Millward, H. R., 899A
Behie, L. A. See Hawboldt, K. A., 90A
Belfort, G. See Serafica, G. C., 21A
Bell, G. See Ghatorae, A. S., 331A
—; See Vaidya, A. M., 765B
—; See Ghatorae, A. S., 1355B
Bell, S. L. See Bushell, M. E., 1099B
Bellamkonda, R.
—; Aebischer, P.: Review: Tissue Engineering in the Nervous System, 543A
Bellhouse, B. J. See Millward, H. R., 899A
Bennett, G. N. See Aristidou, A. A., 944B
—; See Chou, C.-H., 952B
Bentley, W. E. See Wang, M.-Y., 349A
—; See Ko, Y.-F., 847A
Berner, J.-L.
—; Gervais, P.: A New Visualization Chamber to Study the Transient Volumetric Response of Yeast Cells Submitted to Osmotic Shifts, 165A
Beshkova, D. See Frengova, G., 888B
Besson, I. See Larroche, C., 699B
Beuvery, E. C. See Dorresteijn, R. C., 149A
Bezverkov, K. See Halberstadt, C. R., 740A
Bhatia, S. See Rotem, A., 654A
Biebl, H. See Zeng, A.-P., 902B
Bizios, R.
—; Mini-Review: Osteoblasts: An In Vitro Model of Bone–Implant Interactions, 582A
Black, J. P. See Uludag, H., 1199B
Blanch, H. W. See Sharfstein, S. T., 1059A
—; See Hiller, G. W., 303B
—; See Mancuso, A., 563B
—; See Hei, D. J., 1023B
Böker, M.
—; Jördening, H.-J.; Buchholz, K.: Kinetics of Leucrose Formation from Sucrose by Dextransucrase, 856A
—; Jördening, H.-J.; Buchholz, K.: Errata: Kinetics of Leucrose Formation from Sucrose by Dextransucrase, 392B
Bollag, J.-M. See Dec, J., 1132B
Borges de Carvalho, I. See Martins, J. F., 119B
Borys, M. C.
—; Linzer, D. I. H.; Papoutsakis, E. T.: Ammonia Affects the Glycosylation Patterns of Recombinant Mouse Placental Lactogen-I by Chinese Hamster Ovary Cells in a pH-Dependent Manner, 505A
Bos, C. G. See Hunik, J. H., 1153A
Bosley, J. See Ison, A. P., 122A
Bosley, J. A.
—; Clayton, J. C.: Blueprint for a Lipase Support: Use of Hydrophobic Controlled-Pore Glasses as Model Systems, 934A
Brady, D.
—; Stoll, A. D.; Starke, L.; Duncan, J. R.: Chemical and Enzymatic Extraction of Heavy Metal Binding Polymers from Isolated Cell Walls of *Saccharomyces cerevisiae*, 297B
—; Rose, P. D.; Duncan, J. R.: The Use of Hollow Fiber Cross-Flow Microfiltration in Bioaccumulation and Continuous Removal of Heavy Metals from Solution by *Saccharomyces cerevisiae*, 1362B
Bryers, J. D. See Huang, C.-T., 329B
Buchholz, K. See Böker, M., 856A
—; See Böker, M., 392B
Buckland, B. C. See Suphantharika, M., 1007B
—; See Nienow, A. W., 1177B
—; See Junker, B. H., 1315B
Budu, C. See Shahar, A., 826A
Bundgaard-Nielsen, M. See Pedersen, A. G., 1013B

Bushell, D. See San Martin, R., 21B
Bushell, M. E.
—; Bell, S. L.; Scott, M. F.; Spier, R. E.; Wardell, J. N.; Sanders, P. G.: Enhancement of Monoclonal Antibody Yield by Hybridoma Fed-Batch Culture, Resulting in Extended Maintenance of Viable Cell Population, 1099B
Butler, M. See Barnabé, N., 1235B
Butò, S.
—; Pollegioni, L.; D'Angiuro, L.; Pilone, M. S.: Evaluation of D-Amino Acid Oxidase from *Rhodotorula gracilis* for the Production of α-Keto Acids: A Reactor System, 1288B
Buttler, T.
—; Gorton, L.; Jarskog, H.; Marko-Varga, G.; Hahn-Hägerdal, B.; Meinander, N.; Olsson, L.: Monitoring of Ethanol During Fermentation of a Lignocellulose Hydrolysate by On-Line Microdialysis Sampling, Column Liquid Chromatography, and an Alcohol Biosensor, 322B
Byun, S. Y.
—; Pedersen, H.: Two-Phase Airlift Fermentor Operation with Elicitation for the Enhanced Production of Benzophenanthridine Alkaloids in Cell Suspensions of *Escherichia californica*, 14B
Byun, T.-G. See Zeng, A.-P., 1107B

Cabanié, L. See Merten, O.-W., 753B
Cabral, J. M. S. See Serralheiro, M. L. M., 1031A
—; See Pires, M. J., 773B
Camacho, F. See González-Tello, P., 523B
—; See González-Tello, P., 529B
Campi, A. L. See Vaccari, G., 913A
Caplan, B. See Hamilton, D., 700A
Carbonell, R. G. See Powers, D. D., 509B
Carlson, B. M. See Faulkner, J. A., 757A
Caron, A. W.
—; Tom, R. L.; Kamen, A. A.; Massie, B.: Baculovirus Expression System Scaleup by Perfusion of High-Density Sf-9 Cell Cultures, 881A
Carosi, J. A.
—; McIntire, L. V.; Eskin, S. G.: Modulation of Secretion of Vasoactive Materials from Human and Bovine Endothelial Cells by Cyclic Strain, 615A
Carpentier, R. See Loranger, C., 178B
Carter, G. M. See Bambot, S. B., 1139A
Cavallaro, J. F.
—; Kemp, P. D.; Kraus, K. H.: Collagen Fabrics as Biomaterials, 781A
—; Kemp, P. D.; Kraus, K. H.: Erratum: Collagen Fabrics as Biomaterials, 146B
Chalmers, J. J. See Trinh, K., 37A
—; See Garcia-Briones, M. A., 1089B
Chan, C. P. See Robinson, D. K., 727B
Chand, D. See Gutsche, A. T., 801A
Chang, H. N. See Kim, B. S., 892A
—; See Hahn, S. K., 256B
—; See Oh, D. J., 895B
—; See Lee, S. Y., 1337B
Chang, J.-S.
—; Hong, J.: Biosorption of Mercury by the Inactivated Cells of *Pseudomonas aeruginosa* PU21 (Rip64), 999B
Chang, P. L.
—; Hortelano, G.; Tse, M.; Awrey, D. E.: Growth of Recombinant Fibroblasts in Alginate Microcapsules, 925A
Chang, S.-W. See Zhang, Q., 483A
Chang, Y. K. See Kim, B. S., 892A
—; See Hahn, S. K., 256B
Charles, C. See du Moulin, G. C., 693A
Chavarie, C. See Archambault, J., 930B
Chen, C.-I.
—; Mueller, R. F.; Griebe, T.: Kinetic Analysis of Microbial Sulfate Reduction by *Desulfovibrio desulfuricans* in an Anaerobic Upflow Porous Media Biofilm Reactor, 267A
—; Reinsel, M. A.; Mueller, R. F.: Kinetic Investigation of Microbial Souring in Porous Media Using Microbial Consortia from Oil Reservoirs, 263B
Chen, H.-m.
—; Bakir, U.; Reilly, P. J.; Ford, C.: Increased Thermostability of Asn182 → Ala Mutant *Aspergillus awamori* Glucoamylase, 101A
Chen, W.
—; Bailey, J. E.: Application of the Cross-Regulation System as a Metabolic Switch, 1190A
Cheruy, A. See Acuña, G., 1168B
Chew-Darke, J. See du Moulin, G. C., 693A
Chi, C.-M.
—; Vits, H.; Staba, E. J.; Cooke, T. J.; Hu, W.-S.: Morphological Kinetics and Distribution in Somatic Embryo Cultures, 368B
Chin, J. T.
—; Wheeler, S. L.; Klibanov, A. M.: On Protein Solubility in Organic Solvents, 140B
Choi, S. K. See Oh, D. J., 895B
Chou, C.-H.
—; Bennett, G. N.; San, K.-Y.: Effect of Modified Glucose Uptake Using Genetic Engineering Techniques on High-Level Recombinant Protein Production in *Escherichia coli* Dense Cultures, 952B
Christensen, L. H.
—; Nielsen, J.; Villadsen, J.: Degradation of Penicillin-V in Fermentation Media, 165B
Chu, I.-M. See Yang, W.-Y., 439A
Chung, S. W. See Krewson, C. E., 555A
Cieslinski, D. A.
—; Humes, H. D.: Tissue Engineering of a Bioartificial Kidney, 678A
Claeyssens, M. See Nidetzky, B., 961B
Clark, D. S. See Tsao, J.-H., 258A
—; See Affleck, R., 342A
—; See Xu, Z.-F., 515A
—; See Sharfstein, S. T., 1059A
—; See Hiller, G. W., 303B
—; See Mancuso, A., 563B
Clarke, M. B. See Hamilton, D., 700A
Clayton, J. C. See Bosley, J. A., 934A
Collins, M. See Noble, I., 801B
Combes, D. See Marty, A., 497A
Condoret, J.-S. See Marty, A., 497A
Connelly, N. V. See Yabannavar, V. M., 159A
Conti, E. See du Moulin, G. C., 693A
Cooke, T. J. See Chi, C.-M., 368B
Cooper, D. G. See Zenaitis, M. G., 1331B
Corrêa de Sampaio, T. See Martins, J. F., 119B
Corrieu, G. See Acuña, G., 1168B
Couvé, E. See Merten, O.-W., 753B
Creagh, A. L.
—; Hasenack, B. B. E.; Van der Padt, A.; Sudhölter, E. J. R.; Van't Riet, K.: Separation of Amino-Acid Enantiomers Using Micellar-Enhanced Ultrafiltration, 690B
Cyr, C. See du Moulin, G. C., 693A

D'Amore, T. See Austin, G. D., 337A
D'Angiuro, L. See Butò, S., 1288B
Dahlstrom, D. See Nagpal, S., 357A
Dai, W. See Krewson, C. E., 555A
Damodaran, V. K. See Park, C.-H., 1306B
Dandulakis, G.
—; Herr, J. C.; Kirwan, D. J.: Physiological Responses of Hybridoma Cells in a Protein-Free Medium to Soluble and Immobilized Antigen, 1155B
Daniel, R. M. See Wilson, S.-A., 225A
—; See Wilson, S.-A., 337B
Danielsson, B. See Dočolomanský, P., 286A
Dasgupta, G. See Weiner, C., 55B
David, Y. See Shahar, A., 826A
Davies, B. See du Moulin, G. C., 693A
de Beer, D.
—; Stoodley, P.; Roe, F.; Lewandowski, Z.: Effects of Biofilm Structures on Oxygen Distribution and Mass Transport, 1131A
—; Stoodley, P.; Lewandowski, Z.: Liquid Flow in Heterogeneous Biofilms, 636B
De Cordt, S.
—; Hendrickx, M.; Maesmans, G.; Tobback, P.: The Influence of Polyalcohols and Carbohydrates on the Thermostability of α-Amylase, 107A
—; Avila, I.; Hendrickx, M.; Tobback, P.: DSC and Protein-Based Time–Temperature Integrators: Case Study of α-Amylase Stabilized by Polyols and/or Sugar, 859B
de Gooijer, C. D. See Dorresteijn, R. C., 149A
—; See Hunik, J. H., 1153A
De heyder, B.
—; Overmeire, A.; Van Langenhove, H.; Verstraete, W.: Ethene Removal from a Synthetic Waste Gas Using a Dry Biobed, 642B
Dec, J.
—; Bollag, J.-M.: Use of Plant Material for the Decontamination of Water Polluted with Phenols, 1132B

Deckwer, W.-D. See Zeng, A.-P., 902B
—; See Zeng, A.-P., 1107B
Dedhia, N. N.
—; Hottiger, T.; Bailey, J. E.: Overproduction of Glycogen in *Escherichia coli* Blocked in the Acetate Pathway Improves Cell Growth, 132B
Degn, H. See Hansen, K. F., 347B
DeLancey, G. B. See Wu, W., 1217B
Demetriou, A. A. See Rozga, J., 645A
DiCosmo, F. See Fett-Neto, A. G., 205B
—; See Fett-Neto, A. G., 967B
Diks, R. M. M.
—; Ottengraf, S. P. P.; Vrijland, S.: The Existence of a Biological Equilibrium in a Trickling Filter for Waste Gas Purification, 1279B
Dočolomanský, P.
—; Gemeiner, P.; Mislovičová, D.; Štefuca, V.; Danielsson, B.: Screening of Concanavalin A–Bead Cellulose Conjugates Using an Enzyme Thermistor with Immobilized Invertase as the Reporter Catalyst, 286A
Doran, J. B.
—; Aldrich, H. C.; Ingram, L. O.: Saccharification and Fermentation of Sugar Cane Bagasse by *Klebsiella oxytoca* P2 Containing Chromosomally Integrated Genes Encoding the *Zymomonas mobilis* Ethanol Pathway, 240B
Doran, P. M. See Wongsamuth, R., 481B
—; See Yu, S., 880B
Dordick, J. S. See Xu, Z.-F., 515A
—; See Paradkar, V. M., 529A
Dorresteijn, R. C.
—; de Gooijer, C. D.; Tramper, J.; Beuvery, E. C.: A Method for Simultaneous Determination of Solubility and Transfer Coefficient of Oxygen in Aqueous Media Using Off-Gas Mass Spectrometry, 149A
Dosi, E. See Vaccari, G., 913A
Doušová, M. See Linek, V., 477A
Driscoll, J. See Petach, H. H., 1018B
Dror, Y. See Freeman, A., 1083B
Drouet, P.
—; Zhang, M.; Legoy, M. D.: Enzymatic Synthesis of Alkyl β-D-Xylosides by Transxylosylation and Reverse Hydrolysis, 1075A
Drtina, G. J. See Orsat, B., 1265B
Drumheller, P. D.
—; Elbert, D. L.; Hubbell, J. A.: Multifunctional Poly(ethylene glycol) Semi-Interpenetrating Polymer Networks as Highly Selective Adhesive Substrates for Bioadhesive Peptide Grafting, 772A
du Moulin, G. C.
—; Stack, J.; Pitkin, Z.; Chew-Darke, J.; Cyr, C.; White, A.; Ho, L.; Shen, Y.-J.; Hamilton, D.; Davies, B.; Charles, C.; Conti, E.; Liu, V.: A 3-Year Experience of Quality Control and Quality Assurance in the Multisite Delivery of a Lymphocyte-Based Cellular Therapy for Renal Cell Carcinoma, 693A
—; See Hamilton, D., 700A
Duncan, J. R. See Brady, D., 297B
—; See Brady, D., 1362B
Dunnill, P. See Jin, K., 455A
—; See Milburn, P. T., 736B
Dyrset, N. See Øyaas, K., 77A
—; See Øyaas, K., 991B

Einsele, A. See Jordan, M., 446A
Elbert, D. L. See Drumheller, P. D., 772A
Elefsiniotis, P.
—; Oldham, W. K.: Anaerobic Acidogenesis of Primary Sludge: The Role of Solids Retention Time, 7B
ELKalay, M. A. See Hei, D. J., 1023B
Ellingsen, T. E. See Øyaas, K., 77A
—; See Øyaas, K., 991B
Emery, A. N. See Singh, R. P., 720B
Emmanual, J. See Freed, L. E., 605A
Eppenberger, H. M. See Jordan, M., 446A
—; See Sucker, H. G., 1246B
Eremenko, A. V. See Barmin, A. V., 849B
Ergas, S. J.
—; Kinney, K.; Fuller, M. E.; Scow, K. M.: Characterization of a Compost Biofiltration System Degrading Dichloromethane, 1048B
Eskin, S. G. See Carosi, J. A., 615A

Fargues, C. See Novella, I. S., 379B
Faulkner, J. A.
—; Carlson, B. M.; Kadhiresan, V. A.: Review: Whole Skeletal Muscle Transplantation: Mechanisms Responsible for Functional Deficits, 757A
Feng, W. See Huth, J. R., 66B
Fett-Neto, A. G.
—; Zhang, W. Y.; DiCosmo, F.: Kinetics of Taxol Production, Growth, and Nutrient Uptake in Cell Suspensions of *Taxus cuspidata*, 205B
—; Melanson, S. J.; Nicholson, S.A.; Pennington, J. J.; DiCosmo, F.: Improved Taxol Yield by Aromatic Carboxylic Acid and Amino Acid Feeding to Cell Cultures of *Taxus cuspidata*, 967B
Field, J. A. See Kato, M. T., 469B
Fiers, W. See Steidler, L., 1074B
Fogler, H. S. See Lappan, R. E., 865A
Ford, C. See Chen, H.-m., 101A
Foy, B. D. See Rotem, A., 654A
—; Toner, M.; Tompkins, R. G.; Yarmush, M. L.: Engineering Organ Perfusion Protocols: NMR Analysis of Hepatocyte Isolation from Perfused Rat Liver, 661A
Frangos, J. A. See Hillsley, M. V., 573A
Franzén, C. J. See Lidén, G., 419B
—; Lidén, G.; Niklasson, C.: A New Method for Studying Microaerobic Fermentations. II. An Experimental Investigation of Xylose Fermentation, 429B
Fraser, D. M. See Saudan, P., 407B
Fredrickson, A. G. See Hatzis, C., 371A
Freed, L. E.
—; Vunjak-Novakovic, G.; Marquis, J. C.; Langer, R.: Kinetics of Chondrocyte Growth in Cell-Polymer Implants, 597A
—; Marquis, J. C.; Vunjak-Novakovic, G.; Emmanual, J.; Langer, R.: Composition of Cell–Polymer Cartilage Implants, 605A
Freeman, A.
—; Dror, Y.: Immobilization of "Disguised" Yeast in Chemically Crosslinked Chitosan Beads, 1083B
Frej, A.-K. B.
—; Hjorth, R.; Hammarström, Å.: Pilot Scale Recovery of Recombinant Annexin V from Unclarified *Escherichia coli* Homogenate Using Expanded Bed Adsorption, 922B
Frengova, G.
—; Simova, E.; Pavlova, K.; Beshkova, D.; Grigorova, D.: Formation of Carotenoids by *Rhodotorula glutinis* in Whey Ultrafiltrate, 888B
Fujiwara, R. See Tanaka, T., 1094A
Fujiyama, K. See Zhong, J.-J., 649B
Fukuda, H. See Miyoshi, H., 635A
—; See Nakajima, J., 1193B
Fuller, M. E. See Ergas, S. J., 1048B
Furuta, T. See Yoshii, H., 57A

Gama, F. M.
—; Teixeira, J. A.; Mota, M.: Cellulose Morphology and Enzymatic Reactivity: A Modified Solute Exclusion Technique, 381A
Garcia-Briones, M. See Trinh, K., 37A
Garcia-Briones, M. A.
—; Chalmers, J. J.: Flow Parameters Associated with Hydrodynamic Cell Injury, 1089B
Gbewonyo, K. See Junker, B. H., 539B
Gemeiner, P. See Dočolomanský, P., 286A
Geng, Q.
—; Park, C.-H.: Pervaporative Butanol Fermentation by *Clostridium acetobutylicum* B18, 978A
Gentile, F. T. See Shoichet, M. S., 563A
Georgiou, G. See Sarkar, A. K., 489B
—; See Sarkar, A. K., 499B
Gervais, P. See Berner, J.-L., 165A
Ghatorae, A. S.
—; Bell, G.; Halling, P. J.: Inactivation of Enzymes by Organic Solvents: New Technique with Well-Defined Interfacial Area, 331A
—; Guerra, M. J.; Bell, G.; Halling, P. J.: Immiscible Organic Solvent Inactivation of Urease, Chymotrypsin, Lipase, and Ribonuclease: Separation of Dissolved Solvent and Interfacial Effects, 1355B
Ghurye, G. L.
—; Vipulanandan, C.; Willson, R. C.: A Practical Approach to Biosurfactant Production Using Nonaseptic Fermentation of Mixed Cultures, 661B
Gilkes, N. R. See Greenwood, J. M., 1295B
Gill, I. See López-Fandiño, R., 1016A
—; See López-Fandiño, R., 1024A
Gille, M.
—; Staude, E.: Symmetric Enzyme Distribution in Asymmetric UF Polysulfone Membranes, 557B

Giorgio, T. See Rozga, J., 645A
Gjaltema, A.
—; Arts, P. A. M.; van Loosdrecht, M. C. M.; Kuenen, J. G.; Heijnen, J. J.: Heterogeneity of Biofilms in Rotating Annular Reactors: Occurrence, Structure, and Consequences, 194B
Glassey, J.
—; Montague, G. A.; Ward, A. C.; Kara, B. V.: Artificial Neural Network Based Experimental Design Procedures for Enhancing Fermentation Development, 397B
Glatz, B. A. See Hsiao, T.-Y., 1228B
Glatz, C. E. See Luther, J. R., 147B
—; See Heng, M. H., 745B
—; See Hsiao, T.-Y., 1228B
González-Tello, P.
—; Camacho, F.; Jurado, E.; Páez, M. P.; Guadix, E. M.: Enzymatic Hydrolysis of Whey Proteins: I. Kinetic Models, 523B
—; Camacho, F.; Jurado, E.; Páez, M. P.; Guadix, E. M.: Enzymatic Hydrolysis of Whey Proteins. II. Molecular-Weight Range, 529B
González-Vara R, A. See Vaccari, G., 913A
Goochee, C. F. See Gramer, M. J., 423A
Goodacre, R.
—; Trew, S.; Wrigley-Jones, C.; Neal, M. J.; Maddock, J.; Ottley, T. W.; Porter, N.; Kell, D. B.: Rapid Screening for Metabolite Overproduction in Fermentor Broths, Using Pyrolysis Mass Spectrometry with Multivariate Calibration and Artificial Neural Networks, 1205B
Goodwin, J. See Hamilton, D., 700A
Gopalan, R.
—; Veeramani, H.: Studies on Microbial Chromate Reduction by *Pseudomonas* Sp. in Aerobic Continuous Suspended Growth Cultures, 471A
Gorton, L. See Buttler, T., 322B
Gramer, M. J.
—; Goochee, C. F.: Glycosidase Activities of the 293 and NS0 Cell Lines, and of an Antibody-Producing Hybridoma Cell Line, 423A
Grätzel, M. See Saudan, P., 407B
Gray, M. R. See Gudi, R. D., 1271B
Greco Jr, G. See Toscano, G., 682B
Greenfield, P. F. See Newland, M., 434A
—; See Power, J. F., 710B
Greenwood, J. M.
—; Gilkes, N. R.; Miller, Jr, R. C.; Kilburn, D. G.; Warren, R. A. J.: Purification and Processing of Cellulose-Binding Domain-Alkaline Phosphatase Fusion Proteins, 1295B
Gregory, C. D. See Singh, R. P., 720B
Gregory, M. E. See Turner, C., 819B
Grévillot, G. See Novella, I. S., 379B
Griebe, T. See Chen, C.-I., 267A
Grigorova, D. See Frengova, G., 888B
Gros, J. B. See Larroche, C., 699B
Guadix, E. M. See González-Tello, P., 523B
—; See González-Tello, P., 529B
Gudi, R. D.
—; Shah, S. L.; Gray, M. R.: Multirate State and Parameter Estimation in an Antibiotic Fermentation with Delayed Measurements, 1271B
Guerra, M. J. See Ghatorae, A. S., 1355B
Günzel, B. See Zeng, A.-P., 902B
Gupta, R. B.
—; Han, C. J.; Johnston, K. P.: Recovery of Proteins and Amino Acids from Reverse Micelles by Dehydration with Molecular Sieves, 830B
Gutsche, A. T.
—; Parsons-Wingerter, P.; Chand, D.; Saltzman, W. M.; Leong, K. W.: *N*-Acetylglucosamine and Adenosine Derivatized Surfaces for Cell Culture: 3T3 Fibroblast and Chicken Hepatocyte Response, 801A
Guwy, A. J.
—; Hawkes, D. L.; Hawkes, F. R.; Rozzi, A. G.: Characterization of a Prototype Industrial On-line Analyzer for Bicarbonate/Carbonate Monitoring, 1325B
Guyre, D. See Hilaly, A. K., 314A

Haas, C. N.
—; Unified Kinetic Treatment for Growth on Dual Nutrients, 154B
Häggström, L. See Ljunggren, J., 808B
Hahn, S. K.
—; Chang, Y. K.; Kim, B. S.; Chang, H. N.: Optimization of Microbial Poly(3-hydroxybutyrate) Recovery Using Dispersions of Sodium Hypochlorite Solution and Chloroform, 256B
Hahn-Hägerdal, B. See Buttler, T., 322B
Halberstadt, C. R.
—; Hardin, R.; Bezverkov, K.; Snyder, D.; Allen, L.; Landeen, L.: The In Vitro Growth of a Three-Dimensional Human Dermal Replacement Using a Single-Pass Perfusion System, 740A
Halling, P. J. See Ghatorae, A. S., 331A
—; See Reimann, A., 1081A
—; See Vaidya, A. M., 765B
—; See Ghatorae, A. S., 1355B
Hamilton, D. See du Moulin, G. C., 693A
—; Goodwin, J.; Clarke, M. B.; du Moulin, G. C.; Liu, V.; Caplan, B.; Babbitt, B.: Preliminary Validation of an Activation Assay for Ex Vivo Activated T Cells Utilized in Cancer Immunotherapy, 700A
Hammarström, Å. See Frej, A.-K. B., 922B
Han, C. J. See Gupta, R. B., 830B
Hansen, K. F.
—; Lauritsen, F. R.; Degn, H.: An On-line Sampling System for Fermentation Monitoring Using Membrane Inlet Mass Spectrometry (MIMS): Application to Phenoxyacetic Acid Monitoring in Penicillin Fermentation, 347B
Hardin, R. See Halberstadt, C. R., 740A
Harris, J. M. See Shoichet, M. S., 563A
Hartley, B. S. See San Martin, R., 21B
Hasenack, B. B. E. See Creagh, A. L., 690B
Hatton, T. A. See Patrickios, C. S., 1031B
Hatzis, C.
—; Srienc, F.; Fredrickson, A. G.: Feeding Heterogeneity in Ciliate Populations: Effects of Culture Age and Nutritional State, 371A
Hawboldt, K. A.
—; Kalogerakis, N.; Behie, L. A.: A Cellular Automaton Model for Microcarrier Cultures, 90A
Hawkes, D. L. See Guwy, A. J., 1325B
Hawkes, F. R. See Guwy, A. J., 1325B
Healy, K. E.
—; Lom, B.; Hockberger, P. E.: Spatial Distribution of Mammalian Cells Dictated by Material Surface Chemistry, 792A
Hei, D. J.
—; ELKalay, M. A.; Lin, A. T. T.; Kshirsagar, B.; Okarma, T. B.; Blanch, H. W.: Removal of Cytokines from HSA-Containing Solutions by Adsorption onto Silica, 1023B
Heijnen, J. J. See van der Heijden, R. T. J. M., 3A
—; See van der Heijden, R. T. J. M., 11A
—; See Rakels, J. L. L., 411A
—; See Smolders, G. J. F., 461A
—; See Gjaltema, A., 194B
—; See Schlatmann, J. E., 461B
—; See Tijhuis, L., 595B
—; See van der Heijden, R. T. J. M., 781B
—; See Smolders, G. J. F., 837B
—; see Tijhuis, L., 867B
Heinzle, E. See Ramsden, J. J., 939A
Hellinga, C. See van der Heijden, R. T. J. M., 3A
—; See van der Heijden, R. T. J. M., 11A
—; See van der Heijden, R. T. J. M., 781B
—; See Tijhuis, L., 867B
Hendrickx, M. See De Cordt, S., 107A
—; See De Cordt, S., 859B
Heng, M. H.
—; Glatz, C. E.: Ion Exchange Immobilization of Charged β-Galactosidase Fusions for Lactose Hydrolysis, 745B
Hernandez-Pinzon, I.
—; Bautista, J.: Microfiltration of Streptococcal Fermentation Broths: Study of the Factors Affecting the Concentration Effect, 270B
Herr, J. C. See Dandulakis, G., 1155B
Hertler, W. R. See Patrickios, C. S., 1031B
Higashitani, K. See Kondo, A., 1B
—; See Kondo, A., 395B
Hilaly, A. K.
—; Karim, M. N.; Guyre, D.: Optimization of an Industrial Microalgae Fermentation, 314A
Hill, Jr., C. G. See Reyes, H. R., 171A
Hiller, G. W.
—; Clark, D. S.; Blanch, H. W.: Transient Responses of Hybridoma Cells in Continuous Culture to Step Changes in

Amino Acid and Vitamin Concentrations, 303B
Hillsley, M. V.
—; Frangos, J. A.: Review: Bone Tissue Engineering: The Role of Interstitial Fluid Flow, 573A
Hink, F. See Trinh, K., 37A
Hjorth, R. See Frej, A.-K. B., 922B
Ho, L. See du Moulin, G. C., 693A
Hobley, T. J.
—; Pamment, N. B.: Differences in Response of *Zymomonas mobilis* and *Saccharomyces cerevisiae* to Change in Extracellular Ethanol Concentration, 155A
Hockberger, P. E. See Healy, K. E., 792A
Holan, Z. R.
—; Volesky, B.: Biosorption of Lead and Nickel by Biomass of Marine Algae, 1001A
Holavanahali, R. See Bambot, S. B., 1139A
Hollister, S. J.
—; Kikuchi, N.: Homogenization Theory and Digital Imaging: A Basis for Studying the Mechanics and Design Principles of Bone Tissue, 586A
Holtzapple, M. T.
—; Ripley, E. P.; Nikolaou, M.: Saccharification, Fermentation, and Protein Recovery from Low-Temperature AFEX-Treated Coastal Bermudagrass, 1122B
Hong, G. See Yang, S.-T., 1124A
Hong, J. See Chang, J.-S., 999B
Hooker, B. S. See Petersen, J. N., 521A
—; Skeen, R. S.; Petersen, J. N.: Biological Destruction of CCl_4: II. Kinetic Modeling, 211B
Horiguchi, K. See Matsunaga, T., 429A
Horowitz, J. B.
—; Vilker, V. L.: Biodegradation Process Development Using a Bacterial Cytochrome in Vivo, 248B
Hortelano, G. See Chang, P. L., 925A
Horvat, P. See Mayr, B., 195A
Horvath, V. See Uludag, H., 1199B
Hottiger, T. See Dedhia, N. N., 132B
Hsiao, T.-Y.
—; Glatz, C. E.; Glatz, B. A.: Broth Recycle in a Yeast Fermentation, 1228B
Hsieh, K. M.
—; Murgel, G. A.; Lion, L. W.; Shuler, M. L.: Interactions of Microbial Biofilms with Toxic Trace Metals: 1. Observation and Modeling of Cell Growth, Attachment, and Production of Extracellular Polymer, 219B
—; Murgel, G. A.; Lion, L. W.; Shuler, M. L.: Interactions of Microbial Biofilms with Toxic Trace Metals: 2. Prediction and Verification of an Integrated Computer Model of Lead (II) Distribution in the Presence of Microbial Activity, 232B
Hu, W.-S. See Pierson, B. A., 685A
—; See Zhou, W., 170B
—; See Chi, C.-M., 368B
Huang, C.-T.
—; Peretti, S. W.; Bryers, J. D.: Effects of Medium Carbon-to-Nitrogen Ratio on Biofilm Formation and Plasmid Stability, 329B
Hubbell, J. A.
—; Palsson, B. O.; Papoutsakis, E. T.: Preface: Tissue Engineering and Cell Therapies: I, 541A
—; Palsson, B. O.; Papoutsakis, E. T.: Preface: Tissue Engineering and Cell Therapies: II, 683A
—; See Drumheller, P. D., 772A
—; See Sawhney, A. S., 383B
Huddleston, J. G.
—; Wang, R.; Lyddiatt, A.: On the Use of Mild Hydrophobic Interaction Chromatography for "Method Scouting" Protein Purification Strategies in Aqueous Two-Phase Systems: A Study Using Model Proteins, 626B
Hulshoff Pol, L. W. See van Houten, R. T., 586B
Humes, H. D. See Cieslinski, D. A., 678A
Hunik, J. H.
—; Bos, C. G.; van den Hoogen, M. P.; De Gooijer, C. D.; Tramper, J.: Co-Immobilized *Nitrosomonas europaea* and *Nitrobacter agilis* Cells: Validation of a Dynamic Model for Simultaneous Substrate Conversion and Growth in κ-Carrageenan Gel Beads, 1153A
Hunt, G. See Nienow, A. W., 1177B
Huth, J. R.
—; Feng, W.; Ruddon, R. W.: Redox Conditions for Stimulation of In Vitro Folding and Assembly of the Glycoprotein Hormone Chorionic Gonadotropin, 66B

Iijima, S. See Kurokawa, H., 95B
—; See Shiba, S., 1055B
Ingram, L. O. See Doran, J. B., 240B
Ip, C. Y. See Robinson, D. K., 727B
Irwin, J. See Robinson, D. K., 727B
Ishaug, S. L. See Mikos, A. G., 673A
Ison, A. P.
—; Macrae, A. R.; Smith, C. G.; Bosley, J.: Mass Transfer Effects in Solvent-Free Fat Interesterification Reactions: Influences on Catalyst Design, 122A
—; See Suphantharika, M., 1007B
Izutsu, K.-i.
—; Yoshioka, S.; Terao, T.: Stabilizing Effect of Amphiphilic Excipients on the Freeze-Thawing and Freeze-Drying of Lactate Dehydrogenase, 1102A

Jacobs, H. See Yang, Y., 207A
Jang, L. K.
—; Diffusivity of Cu^{2+} in Calcium Alginate Gel Beads, 183A
Jarskog, H. See Buttler, T., 322B
Jenkins, N. See Millward, H. R., 899A
Jin, K.
—; Thomas, O. R. T.; Dunnill, P.: Monitoring Recombinant Inclusion Body Recovery in an Industrial Disc Stack Centrifuge, 455A
John, V. T. See Kommareddi, N. S., 215A
Johnson, M. See Mercille, S., 833A
Johnston, K. P. See Gupta, R. B., 830B
Jordan, M.
—; Sucker, H.; Einsele, A.; Widmer, F.; Eppenberger, H. M.: Interactions Between Animal Cells and Gas Bubbles: The Influence of Serum and Pluronic F68 on the Physical Properties of the Bubble Surface, 446A
—; See Sucker, H. G., 1246B
Jördening, H.-J. See Böker, M., 856A
—; See Böker, M., 392B
Junker, B. H.
—; Timberlake, S.; Bailey, F. J.; Reddy, J.; Prud'Homme, R.; Gbewonyo, K.: Influence of Strain and Medium Composition on Filtration of *Escherichia coli* Suspensions, 539B
—; Seamans, T. C.; Ramasubramanyan, K.; Aunins, J.; Paul, E.; Buckland, B. C.: Cultivation of Attenuated Hepatitis A Virus Antigen in a Titanium Static Mixer Reactor, 1315B
Jurado, E. See González-Tello, P., 523B
—; See González-Tello, P., 529B

Kadhiresan, V. A. See Faulkner, J. A., 757A
Kalogerakis, N. See Hawboldt, K. A., 90A
Kamal, M. N. See Newland, M., 434A
Kamali, V. See Naughton, B. A., 810A
Kamat, S. See Affleck, R., 342A
Kamen, A. A. See Caron, A. W., 881A
Kamimura, R. See Tanaka, T., 1094A
Kamiyama, Y. See Yamagiwa, K., 301A
Kan, C.-R. See Lee, C.-J., 309A
Kaneko, T. See Kondo, A., 1B
—; See Kondo, A., 395B
Kaneshiro, S. M. See Tsao, J.-H., 258A
Kang, W. K. See Yoon, S. K., 995A
Kara, B. V. See Glassey, J., 397B
Karim, M. N. See Hilaly, A. K., 314A
Kataoka, T. See Yoshida, H., 1087A
Kato, M. T.
—; Field, J. A.; Versteeg, P.; Lettinga, G.: Feasibility of Expanded Granular Sludge Bed Reactors for the Anaerobic Treatment of Low-Strength Soluble Wastewaters, 469B
Kawakami, K.
—; Nakahara, T.: Importance of Solute Partitioning in Biphasic Oxidation of Benzyl Alcohol by Free and Immobilized Whole Cells of *Pichia pastoris*, 918A
Kawase, Y.
—; Tsujimura, M.: Enhancement of Oxygen Transfer in Highly Viscous Non-Newtonian Fermentation Broths, 1115B
Keeratipibul, S. See Andrews, A. T., 29B
Kell, D. B. See Goodacre, R., 1205B
Keller, H. See Merten, O.-W., 753B
Kelly, S. T.
—; Zydney, A. L.: Effects of Intermolecular Thiol–Disulfide

Interchange Reactions on BSA Fouling During Microfiltration, 972B
Kemp, P. D. See Cavallaro, J. F., 781A
—; See Cavallaro, J. F., 146B
Kennard, M. L.
—; Piret, J. M.: Glycolipid Membrane Anchored Recombinant Protein Production from CHO Cells Cultured on Porous Microcarriers, 45B
Kent, C. A. See Paul, G. C., 655B
Khan, F. R. See Meagher, M. M., 969A
Kikuchi, N. See Hollister, S. J., 586A
Kilburn, D. G. See Greenwood, J. M., 1295B
Kilpatrick, P. K. See Powers, D. D., 509B
Kim, B. S.
—; Lee, S. C.; Lee, S. Y.; Chang, H. N.; Chang, Y. K.; Woo, S. I.: Production of Poly(3-Hydroxybutyric Acid) by Fed-Batch Culture of *Alcaligenes eutrophus* with Glucose Concentration Control, 892A
—; See Hahn, S. K., 256B
Kim, H.-S. See Lee, J.-Y., 1146A
Kim, S. W. See Yang, Y., 207A
Kim, W.-S. See Yoo, S., 1043A
Kinney, K. See Ergas, S. J., 1048B
Kirwan, D. J. See Dandulakis, G., 1155B
Kishimoto, M. See Kitsuta, Y., 87B
Kitajima, Y. See Matsunaga, T., 429A
Kitsuta, Y.
—; Kishimoto, M.: Fuzzy Supervisory Control of Glutamic Acid Production, 87B
Klibanov, A. M. See Chin, J. T., 140B
—; See Orsat, B., 1265B
Knowles, C. J. See Millward, H. R., 899A
Ko, Y.-F.
—; Bentley, W. E.; Weigand, W. A.: A Metabolic Model of Cellular Energetics and Carbon Flux During Aerobic *Escherichia coli* Fermentation, 847A
Kobayashi, H. See Yamagiwa, K., 301A
Kobayashi, K.-y. See Yamazaki, M., 38B
Kobayashi, T. See Kurokawa, H., 95B
—; See Shiba, S., 1055B
Kodukula, P. S.
—; Patterson, J. W.; Surampalli, R. Y.: Sorption and Precipitation of Metals in Activated Sludge, 874A
Kohls, O. See Müller, W., 617B
Kojima, T. See Yoshii, H., 57A
Koller, M. R. See Oh, D. J., 609B
Kominami, M. See Suzuki, T., 1186B
Komives, C. F.
—; Lilley, E.; Russell, A. J.: Biodegradation of Pesticides in Nonionic Water-in-Oil Microemulsions of Tween 85: Relationship Between Micelle Structure and Activity, 946A
Kommareddi, N. S.
—; O'Connor, K. C.; John, V. T.: EPR Characterizations of α-Chymotrypsin Active Site Dynamics in Reversed Micelles at Enhanced Gas Pressures and After Subjection to Clathrate Formation Conditions, 215A
Kondo, A.
—; Kaneko, T.; Higashitani, K.: Development and Application of Thermo-Sensitive Immunomicrospheres for Antibody Purification, 1B
—; Kaneko, T.; Higashitani, K.: Erratum: Development and Application of Thermo-Sensitive Immunomicrospheres for Antibody Purification, 395B
Konishi, Y.
—; Takasaka, Y.; Asai, S.: Kinetics of Growth and Elemental Sulfur Oxidation in Batch Culture of *Thiobacillus ferrooxidans*, 667B
Konstantinov, K. B. See Yoon, S.-j., 983B
Kouvroukoglou, S. See Mikos, A. G., 673A
Kraus, K. H. See Cavallaro, J. F., 781A
—; See Cavallaro, J. F., 146B
Krewson, C. E.
—; Chung, S. W.; Dai, W.; Saltzman, W. M.: Cell Aggregation and Neurite Growth in Gels of Extracellular Matrix Molecules, 555A
Kshirsagar, B. See Hei, D. J., 1023B
Kuenen, J. G. See Gjaltema, A., 194B
Kumazawa, S.
—; Mitsui, A.: Efficient Hydrogen Photoproduction by Synchronously Grown Cells of a Marine Cyanobacterium, *Synechococcus* sp. Miami BG 043511, Under High Cell Density Conditions, 854B
Kurochkin, I. N. See Barmin, A. V., 849B
Kurokawa, H.
—; Park, Y. S.; Iijima, S.; Kobayashi, T.: Growth Characteristics in Fed-Batch Culture of Hybridoma Cells with Control of Glucose and Glutamine Concentrations, 95B
Kwong, S. C. W.
—; Rao, G.: Metabolic Monitoring by Using the Rate of Change of NAD(P)H Fluorescence, 453B

Laffend, L.
—; Shuler, M. L.: Ribosomal Protein Limitations in *Escherichia coli* under Conditions of High Translational Activity, 388A
—; Shuler, M. L.: Structured Model of Genetic Control via the *lac* Promoter in *Escherichia coli*, 399A
Lakowicz, J. R. See Bambot, S. B., 1139A
Landeen, L. See Halberstadt, C. R., 740A
Langer, R. See Freed, L. E., 597A
—; See Freed, L. E., 605A
Langsdorf, L. J.
—; Zydney, A. L.: Effect of Solution Environment on the Permeability of Red Blood Cells, 115A
Lappan, R. E.
—; Fogler, H. S.: *Leuconostoc mesenteroides* Growth Kinetics with Application to Bacterial Profile Modification, 865A
Larroche, C.
—; Besson, I.; Gros, J. B.: Behavior of Spores of *Penicillium roquefortii* During Fed-Batch Bioconversion of Octanoic Acid Into 2-Heptanone, 699B
Latrille, E. See Acuña, G., 1168B
Lauritsen, F. R. See Hansen, K. F., 347B
Lavoie, L. See Archambault, J., 930B
Lazarova, Z.
—; Peeva, L.: Facilitated Transport of Lactic Acid in a Stirred Transfer Cell, 907A
Leak, D. J. See San Martin, R., 21B
Lee, C.-G.
—; Palsson, B. Ø.: High-Density Algal Photobioreactors Using Light-Emitting Diodes, 1161B
Lee, C.-J.
—; Yeh, H.-J.; Yang, W.-Y.; Kan, C.-R.: Separation of Penicillin G from Phenylacetic Acid in a Supported Liquid Membrane System, 309A
—; See Yang, W.-Y., 439A
Lee, D. K. See Robinson, D. K., 727B
Lee, G.-M. See Levee, M. G., 734A
Lee, J.-Y.
—; Roh, J.-R.; Kim, H.-S.: Metabolic Engineering of *Pseudomonas putida* for the Simultaneous Biodegradation of Benzene, Toluene, and *p*-Xylene Mixture, 1146A
Lee, K. M. See Lee, S. Y., 1337B
Lee, S. C. See Kim, B. S., 892A
Lee, S. Y. See Kim, B. S., 892A
—; Rhee, J. S.: Hydrolysis of Triglyceride by the Whole Cell of *Pseudomonas putida* 3SK in Two-Phase Batch and Continuous Reactor Systems, 437B
—; Lee, K. M.; Chang, H. N.; Steinbüchel, A.: Comparison of Recombinant *Escherichia coli* Strains for Synthesis and Accumulation of Poly-(3-Hydroxybutyric Acid) and Morphological Changes, 1337B
Lee, Y.
—; McIntire, L. V.; Zygourakis, K.: Analysis of Endothelial Cell Locomotion: Differential Effects of Motility and Contact Inhibition, 622A
Legoy, M. D. See Drouet, P., 1075A
Lemieux, R. See Mercille, S., 833A
Lenny, A. B. See Robinson, D. K., 727B
Leno, M. See Merten, O.-W., 753B
Lens, P. See Overmeire, A., 387B
Leong, K. W. See Gutsche, A. T., 801A
LePage, E. See Rozga, J., 645A
Lettinga, G. See Kato, M. T., 469B
—; See van Houten, R. T., 586B
Levee, M. G.
—; Lee, G.-M.; Paek, S.-H.; Palsson, B. O.: Microencapsulated Human Bone Marrow Cultures: A Potential Culture System for the Clonal Outgrowth of Hematopoietic Progenitor Cells, 734A
Levine, D. W. See Øyaas, K., 77A
—; See Øyaas, K., 991B
Lewandowski, Z.
—; Roe, F.: Diffusivity of Cu^{2+} in Calcium Alginate Gel Beads: Recalculation, 186A

—; See de Beer, D., 1131A
—; See de Beer, D., 636B
Li, S.-Y. See Ramsden, J. J., 939A
Li, Y. See Yang, S.-T., 1124A
Lidén, G.
—; Franzén, C. J.; Niklasson, C.: A New Method for Studying Microaerobic Fermentations. I. A Theoretical Analysis of Oxygen Programmed Fermentation, 419B
—; See Franzén, C. J., 429B
Lilley, E. See Komives, C. F., 946A
Lilly, M. D. See Russell, A. B., 69A
—; See Suphantharika, M., 1007B
Lin, A. T. T. See Hei, D. J., 1023B
Lin, C.-D. See Yang, W.-Y., 439A
Linek, V.
—; Moucha, T.; Doušová, M.; Sinkule, J.: Measurement of k_La by Dynamic Pressure Method in Pilot-Plant Fermentor, 477A
Linzer, D. I. H. See Borys, M. C., 505A
Lion, L. W. See Hsieh, K. M., 219B
—; See Hsieh, K. M., 232B
Litchfield, J. B. See Zhang, Q., 483A
Liu, V. See du Moulin, G. C., 693A
—; See Hamilton, D., 700A
Ljunggren, J.
—; Häggström, L.: Catabolic Control of Hybridoma Cells by Glucose and Glutamine Limited Fed Batch Cultures, 808B
Lom, B. See Healy, K. E., 792A
López-Fandiño, R.
—; Gill, I.; Vulfson, E. N.: Enzymatic Catalysis in Heterogenous Mixtures of Substrates: The Role of the Liquid Phase and the Effects of "Adjuvants", 1016A
—; Gill, I.; Vulfson, E. N.: Protease-Catalyzed Synthesis of Oligopeptides in Heterogenous Substrate Mixtures, 1024A
Loranger, C.
—; Carpentier, R.: A Fast Bioassay for Phytotoxicity Measurements Using Immobilized Photosynthetic Membranes, 178B
Luo, Y.-H.
—; Mitsui, A.: Hydrogen Production from Organic Substrates in an Aerobic Nitrogen-Fixing Marine Unicellular Cyanobacterium *Synechococcus* sp. Strain Miami BG 043511, 1255B
Luther, J. R.
—; Glatz, C. E.: Genetically Engineered Charge Modifications to Enhance Protein Separation in Aqueous Two-Phase Systems: Electrochemical Partitioning, 147B
Luyben, K. C. A. M. See van der Heijden, R. T. J. M., 3A
—; See van der Heijden, R. T. J. M., 11A
—; See van der Heijden, R. T. J. M., 781B
Lyddiatt, A. See Huddleston, J. G., 626B
—; See Mohan, S. B., 1261B

Macrae, A. R. See Ison, A. P., 122A
Maddock, J. See Goodacre, R., 1205B
Maesmans, G. See De Cordt, S., 107A
Malavallon, M.-A. See Saudan, P., 407B
Mancuso, A. See Sharfstein, S. T., 1059A
—; Sharfstein, S. T.; Tucker, S. N.; Clark, D. S.; Blanch, H. W.: Examination of Primary Metabolic Pathways in a Murine Hybridoma with Carbon-13 Nuclear Magnetic Resonance Spectroscopy, 563B
Mantovani, G. See Vaccari, G., 913A
Marciset, O.
—; Mollet, B.: Multifactorial Experimental Designs for Optimizing Transformation: Electroporation of *Streptococcus thermophilus*, 490A
Maremonti, M. See Toscano, G., 682B
Marko-Varga, G. See Buttler, T., 322B
Marquis, J. C. See Freed, L. E., 597A
—; See Freed, L. E., 605A
Martel, P. See Pires, M. J., 773B
Martins, J. F.
—; Corrêa de Sampaio, T.; Borges de Carvalho, I.; Barreiros, S.: Lipase Catalyzed Esterification of Glycidol in Nonaqueous Solvents: Solvent Effects on Enzymatic Activity, 119B
Marty, A.
—; Combes, D.; Condoret, J.-S.: Continuous Reaction-Separation Process for Enzymatic Esterification in Supercritical Carbon Dioxide, 497A
Massie, B. See Mercille, S., 833A
—; See Caron, A. W., 881A
—; See Mercille, S., 1140B
Matis, K. A.
—; Zouboulis, A. I.: Flotation of Cadmium-Loaded Biomass, 354B
Matsunaga, T.
—; Nakasono, S.; Kitajima, Y.; Horiguchi, K.: Electrochemical Disinfection of Bacteria in Drinking Water Using Activated Carbon Fibers, 429A
Matteuzzi, D. See Vaccari, G., 913A
Mattiasson, B. See Otamiri, M., 987A
—; See Otamiri, M., 73B
—; See Svensson, I., 549B
Mayr, B.
—; Nagy, E.; Horvat, P.; Moser, A.: Scale-Up on Basis of Structured Mixing Models: A New Concept, 195A
McGlave, P. B. See Pierson, B. A., 685A
McIntire, L. V. See Carosi, J. A., 615A
—; See Lee, Y., 622A
Meagher, M. M.
—; Barlett, R. T.; Rai, V. R.; Khan, F. R.: Extraction of rIL-2 Inclusion Bodies from *Escherichia coli* Using Cross-Flow Filtration, 969A
Medve, J.
—; Ståhlberg, J.; Tjerneld, F.: Adsorption and Synergism of Cellobiohydrolase I and II of *Trichoderma reesei* during Hydrolysis of Microcrystalline Cellulose, 1064B
Meinander, N. See Buttler, T., 322B
Melanson, S. J. See Fett-Neto, A. G., 967B
Menawat, A. S. See Tata, M., 283B
Mercille, S.
—; Johnson, M.; Lemieux, R.; Massie, B.: Filtration-Based Perfusion of Hybridoma Cultures in Protein-Free Medium: Reduction of Membrane Fouling by Medium Supplementation with DNase I, 833A
—; Massie, B.: Induction of Apoptosis in Nutrient-Deprived Cultures of Hybridoma and Myeloma Cells, 1140B
Merten, O.-W
—; Moeurs, D.; Keller, H.; Leno, M.; Palfi, G. E.; Cabanié, L.; Couvé, E.: Modified Monoclonal Antibody Production Kinetics, Kappa/Gamma mRNA Levels, and Metabolic Activities in a Murine Hybridoma Selected by Continuous Culture, 753B
Meunier, S. F. See Wilkins, L. M., 747A
Mikos, A. G.
—; Papadaki, M. G.; Kouvroukoglou, S.; Ishaug, S. L.; Thomson, R. C.: Mini-Review: Islet Transplantation to Create a Bioartificial Pancreas, 673A
Milburn, P. T.
—; Dunnill, P.: The Release of Virus-Like Particles from Recombinant *Saccharomyces cerevisiae:* Effect of Freezing and Thawing on Homogenization and Bead Milling, 736B
Miller, J. S. See Pierson, B. A., 685A
Miller, W. M. See Sandstrom, C. E., 706A
Miller, Jr, R. C. See Greenwood, J. M., 1295B
Millward, H. R.
—; Bellhouse, B. J.; Nicholson, A. M.; Beeton, S.; Jenkins, N.; Knowles, C. J.: Mammalian Cell Damage in a Novel Membrane Bioreactor, 899A
Mislovičová, D. See Dočolomanský, P., 286A
Mitsui, A. See Kumazawa, S., 854B
—; See Luo, Y.-H., 1255B
Miyanaga, M. See Nagayasu, T., 1108A
—; See Nagayasu, T., 1118A
Miyoshi, H.
—; Yanagi, K.; Fukuda, H.; Ohshima, N.: Long-Term Continuous Culture of Hepatocytes in a Packed-Bed Reactor Utilizing Porous Resin, 635A
Moeurs, D. See Merten, O.-W, 753B
Mohan, S. B.
—; Lyddiatt, A.: Protein Separation by Differential Drainage from Foam, 1261B
Mollet, B. See Marciset, O., 490A
Montague, G. A. See Glassey, J., 397B
Moreno, P. R. H. See Schlatmann, J. E., 461B
Mori, Y. See Yamazaki, M., 38B
Morsiani, E. See Rozga, J., 645A
Moscioni, A. D. See Rozga, J., 645A
Moser, A. See Mayr, B., 195A
Moskvitina, T. A. See Barmin, A. V., 849B
Mota, M. See Gama, F. M., 381A
Moucha, T. See Linek, V., 477A
Mueller, R. F. See Chen, C.-I., 267A
—; See Chen, C.-I., 263B

Müller, W.
—; Winnefeld, A.; Kohls, O.; Scheper, T.; Zimelka, W.; Baumgärtl, H.: Real and Pseudo Oxygen Gradients in Ca-Alginate Beads Monitored During Polarographic Po_2-Measurements Using Pt-Needle Microelectrodes, 617B
Murgel, G. A. See Hsieh, K. M., 219B
—; See Hsieh, K. M., 232B
Myint, M. See Paquet, V., 445B

Nagayasu, T.
—; Miyanaga, M.; Tanaka, T.; Sakiyama, T.; Nakanishi, K.: Synthesis of Dipeptide Precursors with an Immobilized Thermolysin in Ethyl Acetate, 1108A
—; Miyanaga, M.; Tanaka, T.; Sakiyama, T.; Nakanishi, K.: Synthesis of Aspartame Precursor with an Immobilized Thermolysin in *tert*-Amyl Alcohol, 1118A
Nagpal, S.
—; Dahlstrom, D.; Oolman, T.: A Mathematical Model for the Bacterial Oxidation of a Sulfide Ore Concentrate, 357A
Nagy, E. See Mayr, B., 195A
Nakahara, T. See Kawakami, K., 918A
Nakajima, J.
—; Nakashima, T.; Shima, Y.; Fukuda, H.; Yamane, T.: A Facile Transphosphatidylation Reaction Using a Culture Supernatant of Actinomycetes Directly As a Phospholipase D Catalyst with a Chelating Agent, 1193B
Nakanishi, K. See Tanaka, T., 1094A
—; See Nagayasu, T., 1108A
—; See Nagayasu, T., 1118A
Nakashima, T. See Nakajima, J., 1193B
Nakasono, S. See Matsunaga, T., 429A
Naughton, B. A.
—; San Román, J.; Sibanda, B.; Weintraub, J. P.; Kamali, V.: Stereotypic Culture Systems for Liver and Bone Marrow: Evidence for the Development of Functional Tissue In Vitro and Following Implantation In Vivo, 810A
Neal, M. J. See Goodacre, R., 1205B
Newland, M.
—; Kamal, M. N.; Greenfield, P. F.; Nielsen, L. K.: Ammonia Inhibition of Hybridomas Propagated in Batch, Fed-Batch, and Continuous Culture, 434A
Nicholson, S. A. See Fett-Neto, A. G., 967B
Nicholson, A. M. See Millward, H. R., 899A
Nidetzky, B.
—; Claeyssens, M.: Specific Quantification of *Trichoderma reesei* Cellulases in Reconstituted Mixtures and its Application to Cellulase–Cellulose Binding Studies, 961B
Nielsen, J. See Christensen, L. H., 165B
—; See Pedersen, A. G., 1013B
Nielsen, L. K. See Newland, M., 434A
—; See Power, J. F., 710B
Nienow, A. W.
—; Hunt, G.; Buckland, B. C.: A Fluid Dynamic Study of the Retrofitting of Large Agitated Bioreactors: Turbulent Flow, 1177B
Niklasson, C. See Lidén, G., 419B
—; See Franzén, C. J., 429B
Nikolaou, M. See Holtzapple, M. T., 1122B
Nishida, Y. See Shiba, S., 1055B
Nishihara, H. See Yoshida, H., 1087A
Noble, I. See Andrews, A. T., 29B
—; Collins, M.; Porter, N.; Varley, J.: An Investigation of the Physico-Chemical Basis of Foaming in Fungal Fermentations, 801B
Noguera, D. R.
—; Araki, N.; Rittmann, B. E.: Soluble Microbial Products (SMP) in Anaerobic Chemostats, 1040B
Nohara, D.
—; Yamada, T.; Watanabe, A.; Sakai, T.: Equilibrium and Kinetic Studies on Reversible and Irreversible Denaturation of Micrococcal Nuclease, 276B
Novella, I. S.
—; Fargues, C.; Grévillot, G.: Improvement of the Extraction of Penicillin Acylase from *Escherichia coli* Cells by a Combined Use of Chemical Methods, 379B

O'Connor, K. C. See Kommareddi, N. S., 215A
Oh, D. J.
—; Koller, M. R.; Palsson, B. O.: Frequent Harvesting from Perfused Bone Marrow Cultures Results in Increased Overall Cell and Progenitor Expansion, 609B
—; Choi, S. K.; Chang, H. N.: High-Density Continuous Cultures of Hybridoma Cells in a Depth Filter Perfusion System, 895B
Oh, Y.-S.
—; Shareefdeen, Z.; Baltzis, B. C.; Bartha, R.: Interactions Between Benzene, Toluene, and *p*-Xylene (BTX) During Their Biodegradation, 533B
Ohkawa, A. See Yamagiwa, K., 301A
Ohmura, N.
—; Saiki, H.: Desulfurization of Coal by Microbial Column Flotation, 125B
Ohshima, N. See Miyoshi, H., 635A
Okarma, T. B. See Hei, D. J., 1023B
Oldham, W. K. See Elefsiniotis, P., 7B
Olsson, L. See Buttler, T., 322B
Onodera, M. See Yamagiwa, K., 301A
Oolman, T. See Nagpal, S., 357A
Orsat, B.
—; Drtina, G. J.; Williams, M. G.; Klibanov, A. M.: Effect of Support Material and Enzyme Pretreatment on Enantioselectivity of Immobilized Subtilisin in Organic Solvents, 1265B
Otamiri, M.
—; Adlercreutz, P.; Mattiasson, B.: Polymer–Polymer Organic Solvent Two-Phase System: A New Type of Reaction Medium for Bioorganic Synthesis, 987A
—; Adlercreutz, P.; Mattiasson, B.: A Differential Scanning Calorimetric Study of Chymotrypsin in the Presence of Added Polymers, 73B
Ottengraf, S. P. P. See Diks, R. M. M., 1279B
Ottley, T. W. See Goodacre, R., 1205B
Overmeire, A.
—; Lens, P.; Verstraete, W.: Mass Transfer Limitation of Sulfate in Methanogenic Aggregates, 387B
—; See De heyder, B., 642B
Øyaas, K.
—; Ellingsen, T. E.; Dyrset, N.; Levine, D. W.: Utilization of Osmoprotective Compounds by Hybridoma Cells Exposed to Hyperosmotic Stress, 77A
—; Ellingsen, T. E.; Dyrset, N.; Levine, D. W.: Hyperosmotic Hybridoma Cell Cultures: Increased Monoclonal Antibody Production with Addition of Glycine Betaine, 991B

Paek, S.-H. See Levee, M. G., 734A
Páez, M. P. See González-Tello, P., 523B
—; See González-Tello, P., 529B
Palfi, G. E. See Merten, O.-W., 753B
Palsson, B. Ø. See Lee, C.-G., 1161B
Palsson, B. O. See Varma, A., 275A
—; See Hubbell, J. A., 541A
—; See Hubbell, J. A., 683A
—; See Levee, M. G., 734A
—; See Oh, D. J., 609B
Pamment, N. B. See Hobley, T. J., 155A
Papadaki, M. G. See Mikos, A. G., 673A
Papoutsakis, E. T.
—; Editorial: On boundaries, selectivity, and impact, 1A
—; See Borys, M. C., 505A
—; See Hubbell, J. A., 541A
—; See Hubbell, J. A., 683A
—; See Sandstrom, C. E., 706A
Paquet, V.
—; Myint, M.; Roque, C.; Soucaille, P.: Partitioning of Pristinamycins in Aqueous Two-Phase Systems: A First Step toward the Development of Antibiotic Production by Extractive Fermentation, 445B
Paradkar, V. M.
—; Dordick, J. S.: Mechanism of Extraction of Chymotrypsin into Isooctane at Very Low Concentrations of Aerosol OT in the Absence of Reversed Micelles, 529A
Parenteau, N. L. See Wilkins, L. M., 747A
Park, C.-H. See Geng, Q., 978A
—; Damodaran, V. K.: Effect of Alcohol Feeding Mode on the Biosynthesis of Poly(3-Hydroxybutyrate-*co*-3-Hydroxyvalerate), 1306B
Park, J. T.
—; Rollings, J. E.: Effects of Substrate Branching Characteristics on Kinetics of Enzymatic Depolymerization of Mixed Linear-and Branched Polysaccharides: I. Amylose/Amylopectin α-Amylolysis, 792B

Park, S. H.
—; Ryu, D. D. Y.: Cell Cycle Kinetics and Monoclonal Antibody Productivity of Hybridoma Cells During Perfusion Culture, 361B
Park, T. H. See Yoon, S. K., 995A
Park, Y. S. See Kurokawa, H., 95B
—; See Shiba, S., 1055B
Parsons-Wingerter, P. See Gutsche, A. T., 801A
Pathak, C. P. See Sawhney, A. S., 383B
Patrickios, C. S.
—; Hertler, W. R.; Hatton, T. A.: Protein Complexation with Acrylic Polyampholytes, 1031B
Patterson, J. W. See Kodukula, P. S., 874A
Paul, E. See Junker, B. H., 1315B
Paul, G. C.
—; Kent, C. A.; Thomas, C. R.: Hyphal Vacuolation and Fragmentation in *Penicillium chrysogenum*, 655B
Pavlova, K. See Frengova, G., 888B
Pedersen, A. G.
—; Bundgaard-Nielsen, M.; Nielsen, J.; Villadsen, J.: Characterization of Mixing in Stirred Tank Bioreactors Equipped With Rushton Turbines, 1013B
Pedersen, H. See Byun, S. Y., 14B
Peek, K. See Wilson, S.-A., 225A
—; See Wilson, S.-A., 337B
Peeva, L. See Lazarova, Z., 907A
Pendse, G. J.
—; Bailey, J. E.: Effect of *Vitreoscilla* Hemoglobin Expression on Growth and Specific Tissue Plasminogen Activator Productivity in Recombinant Chinese Hamster Ovary Cells, 1367B
Pennington, J. J. See Fett-Neto, A. G., 967B
Pépin, M.-F. See Archambault, J., 930B
Peretti, S. W. See Huang, C.-T., 329B
Petach, H. H.
—; Driscoll, J.: Transparent Chitosan Derivatives for the Immobilization of Glutamate Dehydrogenase, 1018B
Petersen, J. N.
—; Skeen, R. S.; Amos, K. M.; Hooker, B. S.: Biological Destruction of CCl_4: I. Experimental Design and Data, 521A
—; See Hooker, B. S., 211B
Petersen, S. B. See Pires, M. J., 773B
Pierson, B. A.
—; Miller, J. S.; Verfaillie, C.; McGlave, P. B.; Hu, W.-S.: Population Dynamics of Human Activated Natural Killer Cells in Culture, 685A
Pilone, M. S. See Butò, S., 1288B
Pimbley, J. See Serafica, G. C., 21A
Pires, M. J.
—; Martel, P.; Baptista, A.; Petersen, S. B.; Willson, R. C.; Cabral, J. M. S.: Improving Protein Extraction Yield in Reversed Micellar Systems Through Surface Charge Engineering, 773B
Piret, J. M. See Kennard, M. L., 45B
Pirozzi, D. See Toscano, G., 682B
Pitkin, Z. See du Moulin, G. C., 693A
Pollegioni, L. See Butò, S., 1288B
Porter, N. See Noble, I., 801B
—; See Goodacre, R., 1205B
Posten, C. See Zeng, A.-P., 1107B
Power, J. F.
—; Reid, S.; Radford, K. M.; Greenfield, P. F.; Nielsen, L. K.: Modeling and Optimization of the Baculovirus Expression Vector System in Batch Suspension Culture, 710B
Powers, D. D.
—; Carbonell, R. G.; Kilpatrick, P. K.: Affinity Precipitation of an Antibody by Ligand-Modified Phospholipids, 509B
Prasetyo, I. See Volesky, B., 1010A
Prenosil, J. E. See Ramsden, J. J., 939A
Prosky, S. J. See Wilkins, L. M., 747A
Prud'Homme, R. See Junker, B. H., 539B
Pyle, D. L. See Andrews, B. A., 1052A
—; See Regalado, C., 674B

Radford, K. M. See Power, J. F., 710B
Rai, V. R. See Meagher, M. M., 969A
Rakels, J. L. L.
—; Romein, B.; Straathof, A. J. J.; Heijnen, J. J.: Kinetic Analysis of Enzymatic Chiral Resolution by Progress Curve Evaluation, 411A
Ramasubramanyan, K. See Junker, B. H., 1315B
Ramkrishna, D.
—; Toward a Self-Similar Theory of Microbial Populations, 138A
Ramsden, J. J.
—; Li, S.-Y.; Prenosil, J. E.; Heinzle, E.: Kinetics of Adhesion and Spreading of Animal Cells, 939A
Rane, K. D.
—; Sims, K. A.: Oxygen Uptake and Citric Acid Production by *Candida lipolytica* Y 1095, 131A
Rao, G. See Bambot, S. B., 1139A
—; See Kwong, S. C. W., 453B
Reddy, J. See Junker, B. H., 539B
Regalado, C.
—; Asenjo, J. A.; Pyle, D. L.: Protein Extraction by Reverse Micelles: Studies on the Recovery of Horseradish Peroxidase, 674B
Reid, J. F. See Zhang, Q., 483A
Reid, S. See Power, J. F., 710B
Reilly, P. J. See Chen, H.-m., 101A
Reimann, A.
—; Robb, D. A.; Halling, P. J.: Solvation of CBZ–Amino Acid Nitrophenyl Esters in Organic Media and the Kinetics of Their Transesterification by Subtilisin, 1081A
Reinsel, M. A. See Chen, C.-I., 263B
Remaut, E. See Steidler, L., 1074B
Ren, J. See Zhang, Q., 483A
Reuveny, S. See Shahar, A., 826A
Reyes, H. R.
—; Hill, Jr., C. G.: Kinetic Modeling of Interesterification Reactions Catalyzed by Immobilized Lipase, 171A
Rhee, J. S. See Lee, S. Y., 437B
Ripley, E. P. See Holtzapple, M. T., 1122B
Rittmann, B. E. See Noguera, D. R., 1040B
Robb, D. A. See Yang, Z., 365A
—; See Reimann, A., 1081A
Robinson, C. W. See Baldwin, C. V., 46A
Robinson, D. K.
—; Chan, C. P.; Ip, C. Y.; Tsai, P. K.; Tung, J.; Seamans, T. C.; Lenny, A. B.; Lee, D. K.; Irwin, J.; Silberklang, M.: Characterization of a Recombinant Antibody Produced in the Course of a High Yield Fed-Batch Process, 727B
Roe, F. See Lewandowski, Z., 186A
—; See de Beer, D., 1131A
Roh, J.-R. See Lee, J.-Y., 1146A
Rollings, J. E. See Park, J. T., 792B
Romein, B. See van der Heijden, R. T. J. M., 3A
—; See van der Heijden, R. T. J. M., 11A
—; See Rakels, J. L. L., 411A
—; See van der Heijden, R. T. J. M., 781B
Roque, C. See Paquet, V., 445B
Rose, P. D. See Brady, D., 1362B
Ross, A. See Zeng, A.-P., 902B
Rotem, A.
—; Toner, M.; Bhatia, S.; Foy, B. D.; Tompkins, R. G.; Yarmush, M. L.: Oxygen Is a Factor Determining In Vitro Tissue Assembly: Effects on Attachment and Spreading of Hepatocytes, 654A
Roukas, T.
—; Ethanol Production from Nonsterilized Carob Pod Extract by Free and Immobilized *Saccharomyces cerevisiae* Cells Using Fed-Batch Culture, 189A
Rozga, J.
—; Morsiani, E.; LePage, E.; Moscioni, A. D.; Giorgio, T.; Demetriou, A. A.: Isolated Hepatocytes in a Bioartificial Liver: A Single Group View and Experience, 645A
Rozzi, A. G. See Guwy, A. J., 1325B
Ruckenstein, E.
—; Wang, X.-B.: Production of Lignin Peroxidase by *Phanerochaete chrysosporium* Immobilized on Porous Poly(Styrene-Divinylbenzene) Carrier and Its Application to the Degrading of 2-Chlorophenol, 79B
Ruddon, R. W. See Huth, J. R., 66B
Russell, A. B.
—; Thomas, C. R.; Lilly, M. D.: The Influence of Vessel Height and Top-Section Size on the Hydrodynamic Characteristics of Airlift Fermentors, 69A
Russell, A. J. See Yang, F., 232A
—; See Affleck, R., 342A
—; See Komives, C. F., 946A
Ryll, T.
—; Valley, U.; Wagner, R.: Biochemistry of Growth Inhibition by Ammonium Ions in Mammalian Cells, 184B
Ryu, D. D. Y. See Park, S. H., 361B

Saiki, H. See Ohmura, N., 125B
Sakai, T. See Nohara, D., 276B
Sakiyama, T. See Nagayasu, T., 1108A
—; See Nagayasu, T., 1118A

Saksena, S.
—; Zydney, A. L.: Effect of Solution pH and Ionic Strength on the Separation of Albumin from Immunoglobulins (IgG) by Selective Filtration, 960A
Saltzman, W. M. See Krewson, C. E., 555A
—; See Gutsche, A. T., 801A
San, K.-Y. See Aristidou, A. A., 944B
—; See Chou, C.-H., 952B
San Martin, R.
—; Bushell, D.; Leak, D. J.; Hartley, B. S.: Cultivation of an L-Lactate Dehydrogenase Mutant of *Bacillus stearothermophilus* in Continuous Culture with Cell Recycle, 21B
San Román, J. See Naughton, B. A., 810A
Sanders, P. G. See Bushell, M. E., 1099B
Sandstrom, C. E.
—; Miller, W. M.; Papoutsakis, E. T.: Review: Serum-Free Media for Cultures of Primitive and Mature Hematopoietic Cells, 706A
Sára, M. See Weiner, C., 321A
—; See Weiner, C., 55B
Sarkar, A. K.
—; Georgiou, G.; Sharma, M. M.: Transport of Bacteria in Porous Media: I. An Experimental Investigation, 489B
—; Georgiou, G.; Sharma, M. M.: Transport of Bacteria in Porous Media: II. A Model for Convective Transport and Growth, 499B
Sato, T. See Suzuki, T., 1186B
Saudan, P.
—; Zakeeruddin, S. M.; Malavallon, M.-A.; Grätzel, M.; Fraser, D. M.: Novel Redox Surfactants and Their Interactions with Glucose Oxidase of *Aspergillus niger*, 407B
Sawhney, A. S.
—; Pathak, C. P.; Hubbell, J. A.: Modification of Islet of Langerhans Surfaces with Immunoprotective Poly(ethylene glycol) Coatings via Interfacial Photopolymerization, 383B
Scheper, T. See Müller, W., 617B
Schlatmann, J. E.
—; Moreno, P. R. H.; Vinke, J. L.; ten Hoopen, H. J. G.; Verpoorte, R.; Heijnen, J. J.: Effect of Oxygen and Nutrient Limitation on Ajmalicine Production and Related Enzyme Activities in High Density Cultures of *Catharanthus roseus*, 461B
Scott, M. F. See Bushell, M. E., 1099B
Scow, K. M. See Ergas, S. J., 1048B
Seamans, T. C. See Robinson, D. K., 727B
—; See Junker, B. H., 1315B
Sefton, M. V. See Uludag, H., 1199B
Seki, T. See Zhong, J.-J., 649B
Serafica, G. C.
—; Pimbley, J.; Belfort, G.: Protein Fractionation Using Fast Flow Immobilized Metal Chelate Affinity Membranes, 21A
Serralheiro, M. L. M.
—; Cabral, J. M. S.: Synthesis of AcPheLeuNH$_2$ by α-Chymotrypsin in TTAB Reversed Micelles: Application of Response Surface Methodology to the Optimization of the System, 1031A
Shah, S. L. See Gudi, R. D., 1271B
Shahar, A.
—; Reuveny, S.; David, Y.; Budu, C.; Shainberg, A.: Cerebral Neurons, Skeletal Myoblasts, and Cardiac Muscle Cells Cultured on Macroporous Beads, 826A
Shainberg, A. See Shahar, A., 826A
Shareefdeen, Z. See Oh, Y.-S., 533B
Sharfstein, S. T.
—; Tucker, S. N.; Mancuso, A.; Blanch, H. W.; Clark, D. S.: Quantitative In Vivo Nuclear Magnetic Resonance Studies of Hybridoma Metabolism, 1059A
—; See Mancuso, A., 563B
Sharma, M. M. See Sarkar, A. K., 489B
—; See Sarkar, A. K., 499B
Shen, H.
—; Wang, Y.-T.: Modeling Hexavalent Chromium Reduction in *Escherichia coli* 33456, 293A
Shen, Y.-J. See du Moulin, G. C., 693A
Shiba, S.
—; Nishida, Y.; Park, Y. S.; Iijima, S.; Kobayashi, T.: Improvement of Cloned α-Amylase Gene Expression in Fed-Batch Culture of Recombinant *Saccharomyces cerevisiae* by Regulating both Glucose and Ethanol Concentrations Using a Fuzzy Controller, 1055B
Shima, Y. See Nakajima, J., 1193B
Shoichet, M. S.
—; Winn, S. R.; Athavale, S.; Harris, J. M.; Gentile, F. T.: Poly(ethylene oxide)-Grafted Thermoplastic Membranes for Use as Cellular Hybrid Bio-Artificial Organs in the Central Nervous System, 563A
Shuler, M. L. See Laffend, L., 388A
—; See Laffend, L., 399A
—; See Hsieh, K. M., 219B
—; See Hsieh, K. M., 232B
Sibanda, B. See Naughton, B. A., 810A
Sidhoum, M. See Wu, W., 1217B
Silberklang, M. See Robinson, D. K., 727B
Simova, E. See Frengova, G., 888B
Sims, K. A. See Rane, K. D., 131A
Singh, R. P.
—; Al-Rubeai, M.; Gregory, C. D.; Emery, A. N.: Cell Death in Bioreactors: A Role for Apoptosis, 720B
Singh, V. See Yabannavar, V. M., 159A
Singhvi, R.
—; Stephanopoulos, G.; Wang, D. I. C.: Review: Effects of Substratum Morphology on Cell Physiology, 764A
Sinkule, J. See Linek, V., 477A
Skeen, R. S. See Petersen, J. N., 521A
—; See Hooker, B. S., 211B
Sleytr, U. B. See Weiner, C., 321A
—; See Weiner, C., 55B
Smith, C. G. See Ison, A. P., 122A
Smolders, G. J. F.
—; van der Meij, J.; van Loosdrecht, M. C. M.; Heijnen, J. J.: Model of the Anaerobic Metabolism of the Biological Phosphorus Removal Process: Stoichiometry and pH Influence, 461A
—; van der Meij, J.; van Loosdrecht, M. C. M.; Heijnen, J. J.: Stoichiometric Model of the Aerobic Metabolism of the Biological Phosphorus Removal Process, 837B
Snyder, D. See Halberstadt, C. R., 740A
Soucaille, P. See Paquet, V., 445B
Spier, R. E. See Bushell, M. E., 1099B
Srienc, F. See Hatzis, C., 371A
Staba, E. J. See Chi, C.-M., 368B
Stack, J. See du Moulin, G. C., 693A
Ståhlberg, J. See Medve, J., 1064B
Starke, L. See Brady, D., 297B
Staude, E. See Gille, M., 557B
Štefuca, V. See Dočolomanský, P., 286A
Steidler, L.
—; Fiers, W.; Remaut, E.: Efficient Specific Release of Periplasmic Proteins from *Escherichia coli* using Temperature Induction of Cloned *kil* Gene of pMB9, 1074B
Steinbüchel, A. See Lee, S. Y., 1337B
Stephanopoulos, G. See Singhvi, R., 764A
Stoll, A. D. See Brady, D., 297B
Stoodley, P. See de Beer, D., 1131A
—; See de Beer, D., 636B
Straathof, A. J. J. See Rakels, J. L. L., 411A
Sucker, H. See Jordan, M., 446A
Sucker, H. G.
—; Jordan, M.; Eppenberger, H. M.; Widmer, F.: Bubble Bed Reactor: A Reactor Design to Minimize the Damage of Bubble Aeration on Animal Cells, 1246B
Sudhölter, E. J. R. See Creagh, A. L., 690B
Suphantharika, M.
—; Ison, A. P.; Lilly, M. D.; Buckland, B. C.: The Influence of Dissolved Oxygen Tension on the Synthesis of the Antibiotic Difficidin by *Bacillus subtilis*, 1007B
Surampalli, R. Y. See Kodukula, P. S., 874A
Suzawa, V. See Xu, Z.-F., 515A
Suzuki, T.
—; Sato, T.; Kominami, M.: A Dense Cell Retention Culture System Using a Stirred Ceramic Membrane Reactor, 1186B
Svensson, I.
—; Wehtje, E.; Adlercreutz, P.; Mattiasson, B.: Effects of Water Activity on Reaction Rates and Equilibrium Positions in Enzymatic Esterifications, 549B
Swaisgood, H. E. See Walsh, M. K., 1348B

Tag, C. See Zeng, A.-P., 902B
Takasaka, Y. See Konishi, Y., 667B
Takezawa, T. See Yamazaki, M., 38B

Tanaka, T.
—; Kamimura, R.; Fujiwara, R.; Nakanishi, K.: Crossflow Filtration of Yeast Broth Cultivated in Molasses, 1094A
—; See Nagayasu, T., 1108A
—; See Nagayasu, T., 1118A
Tasaka, K. See Yamagiwa, K., 301A
Tata, M.
—; Menawat, A. S.: Cyclic AMP Regulation of Tylosin Biosynthesis and Secondary Metabolism in *Streptomyces fradiae*, 283B
Teixeira, J. A. See Gama, F. M., 381A
ten Hoopen, H. J. G. See Schlatmann, J. E., 461B
Terao, T. See Izutsu, K.-i., 1102A
Thomas, C. R. See Russell, A. B., 69A
—; See Paul, G. C., 655B
Thomas, O. R. T. See Jin, K., 455A
Thomson, R. C. See Mikos, A. G., 673A
Thornhill, N. F. See Turner, C., 819B
Tijhuis, L.
—; van Loosdrecht, M. C. M.; Heijnen, J. J.: Formation and Growth of Heterotrophic Aerobic Biofilms on Small Suspended Particles in Airlift Reactors, 595B
—; van Benthum, W. A. J.; van Loosdrecht, M. C. M.; Heijnen J. J.: Solids Retention Time in Spherical Biofilms in a Biofilm Airlift Suspension Reactor, 867B
Timberlake, S. See Junker, B. H., 539B
Tjerneld, F. See Medve, J., 1064B
Tobback, P. See De Cordt, S., 107A
—; See De Cordt, S., 859B
Tom, R. L. See Caron, A. W., 881A
Tompkins, R. G. See Rotem, A., 654A
—; See Foy, B. D., 661A
Toner, M. See Rotem, A., 654A
—; See Foy, B. D., 661A
Torres, N. V.
—; Modeling Approach to Control of Carbohydrate Metabolism During Citric Acid Accumulation by *Aspergillus niger:* I. Model Definition and Stability of the Steady State, 104B
—; Modeling Approach to Control of Carbohydrate Metabolism During Citric Acid Accumulation by *Aspergillus niger:* II. Sensitivity Analysis, 112B
—; Application of the Transition Time of Metabolic Systems as a Criterion for Optimization of Metabolic Processes, 291B
Toscano, G.
—; Pirozzi, D.; Maremonti, M.; Greco Jr, G.: Solid-State Enzyme Deactivation in Air and in Organic Solvents, 682B
Tramper, J. See Dorresteijn, R. C., 149A
—; See Hunik, J. H., 1153A
Trew, S. See Goodacre, R., 1205B
Trinh, K.
—; Garcia-Briones, M.; Hink, F.; Chalmers, J. J.: Quantification of Damage to Suspended Insect Cells as a Result of Bubble Rupture, 37A
Tsai, P. K. See Robinson, D. K., 727B
Tsai, S.-W.
—; Wei, H.-J.: Effect of Solvent on Enantioselective Esterification of Naproxen by Lipase with Trimethylsilyl Methanol, 64A
Tsao, J.-H.
—; Kaneshiro, S. M.; Yu, S.-s.; Clark, D. S.: Continuous Culture of *Methanococcus jannaschii*, an Extremely Thermophilic Methanogen, 258A
Tse, M. See Chang, P. L., 925A
Tsuchida, M. See Yamazaki, M., 38B
Tsujimura, M. See Kawase, Y., 1115B
Tucker, S. N. See Sharfstein, S. T., 1059A
—; See Mancuso, A., 563B
Tung, J. See Robinson, D. K., 727B
Turner, C.
—; Gregory, M. E.; Thornhill, N. F.: Closed-Loop Control of Fed-Batch Cultures of Recombinant *Escherichia coli* Using On-Line HPLC, 819B

Uludag, H.
—; Horvath, V.; Black, J. P.; Sefton, M. V.: Viability and Protein Secretion from Human Hepatoma (HepG2) Cells Encapsulated in 400-μm Polyacrylate Microcapsules by Submerged Nozzle–Liquid Jet Extrusion, 1199B

Vaccari, G.
—; Dosi, E.; Campi, A. L.; González-Vara R, A.; Matteuzzi, D.; Mantovani, G.: A Near-Infrared Spectroscopy Technique for the Control of Fermentation Processes: An Application to Lactic Acid Fermentation, 913A
Vaidya, A. M.
—; Halling, P. J.; Bell, G.: Surfactant-Induced Breakthrough Effects During the Operation of Two-Phase Biocatalytic Membrane Reactors, 765B
Vakharia, V. See Wang, M.-Y., 349A
Valley, U. See Ryll, T., 184B
van Benthum, W. A. J. See Tijhuis, L., 867B
van den Hoogen, M. P. See Hunik, J. H., 1153A
van der Heijden, R. T. J. M.
—; Heijnen, J. J.; Hellinga, C.; Romein, B.; Luyben, K. C. A. M.: Linear Constraint Relations in Biochemical Reaction Systems: I. Classification of the Calculability and the Balanceability of Conversion Rates, 3A
—; Romein, B.; Heijnen, J. J.; Hellinga, C.; Luyben, K. C. A. M.: Linear Constraint Relations in Biochemical Reaction Systems: II. Diagnosis and Estimation of Gross Errors, 11A
—; Romein, B.; Heijnen, J. J.; Hellinga, C.; Luyben, K. C. A. M.: Linear Constraint Relations in Biochemical Reaction Systems: III. Sequential Application of Data Reconciliation for Sensitive Detection of Systematic Errors, 781B
van der Meij, J. See Smolders, G. J. F., 461A
—; See Smolders, G. J. F., 837B
Van der Padt, A. See Creagh, A. L., 690B
van Houten, R. T.
—; Hulshoff Pol, L. W.; Lettinga, G.: Biological Sulphate Reduction Using Gas-Lift Reactors Fed with Hydrogen and Carbon Dioxide as Energy and Carbon Source, 586B
Van Langenhove, H. See De heyder, B., 642B
van Loosdrecht, M. C. M. See Smolders, G. J. F., 461A
—; See Gjaltema, A., 194B
—; See Tijhuis, L., 595B
—; See Smolders, G. J. F., 837B
—; See Tijhuis, L., 867B
Van't Riet, K. See Creagh, A. L., 690B
Varley, J. See Noble, I., 801B
Varma, A.
—; Palsson, B. O.: Predictions for Oxygen Supply Control to Enhance Population Stability of Engineered Production Strains, 275A
Veeramani, H. See Gopalan, R., 471A
Verfaillie, C. See Pierson, B. A., 685A
Verpoorte, R. See Schlatmann, J. E., 461B
Versteeg, P. See Kato, M. T., 469B
Verstraete, W. See Overmeire, A., 387B
—; See De heyder, B., 642B
Vilker, V. L. See Horowitz, J. B., 248B
Villadsen, J. See Christensen, L. H., 165B
—; See Pedersen, A. G., 1013B
Vinke, J. L. See Schlatmann, J. E., 461B
Vipulanandan, C. See Ghurye, G. L., 661B
Vits, H. See Chi, C.-M., 368B
Volesky, B. See Holan, Z. R., 1001A
—; Prasetyo, I.: Cadmium Removal in a Biosorption Column, 1010A
Vrijland, S. See Diks, R. M. M., 1279B
Vulfson, E. N. See López-Fandiño, R., 1016A
—; See López-Fandiño, R., 1024A
Vunjak-Novakovic, G. See Freed, L. E., 597A
—; See Freed, L. E., 605A

Wagner, R. See Ryll, T., 184B
Walsh, M. K.
—; Swaisgood, H. E.: An *Escherichia coli* Plasmid Vector System for Production of Streptavidin Fusion Proteins: Expression and Bioselective Adsorption of Streptavidin-β-Galactosidase, 1348B
Wang, D. I. C. See Singhvi, R., 764A
—; See Xie, L., 1164A
—; See Xie, L., 1175A
Wang, M.-Y.
—; Bentley, W. E.; Vakharia, V.: Purification of a Recombinant Protein Produced in a Baculovirus Expression System by Immobilized Metal Affinity Chromatography, 349A
Wang, R. See Huddleston, J. G., 626B
Wang, X.-B. See Ruckenstein, E., 79B

Wang, Y.-T. See Shen, H., 293A
Wangikar, P. See Xu, Z.-F., 515A
Ward, A. C. See Glassey, J., 397B
Wardell, J. N. See Bushell, M. E., 1099B
Warren, R. A. J. See Greenwood, J. M., 1295B
Watanabe, A. See Nohara, D., 276B
Watson, R. W. J. See Austin, G. D., 337A
Watson, S. R. See Wilkins, L. M., 747A
Wehtje, E. See Svensson, I., 549B
Wei, H.-J. See Tsai, S.-W., 64A
Weigand, W. A. See Ko, Y.-F., 847A
Weiner, C.
—; Sára, M.; Sleytr, U. B.: Novel Protein A Affinity Matrix Prepared from Two-Dimensional Protein Crystals, 321A
—; Sára, M.; Dasgupta, G.; Sleytr, U. B.: Affinity Cross-Flow Filtration: Purification of IgG with a Novel Protein A Affinity Matrix Prepared from Two-Dimensional Protein Crystals, 55B
Weintraub, J. P. See Naughton, B. A., 810A
Wheeler, S. L. See Chin, J. T., 140B
White, A. See du Moulin, G. C., 693A
Widmer, F. See Jordan, M., 446A
—; See Sucker, H. G., 1246B
Wilkins, E. See Atanasov, P., 262A
Wilkins, L. M.
—; Watson, S. R.; Prosky, S. J.; Meunier, S. F.; Parenteau, N. L.: Development of a Bilayered Living Skin Construct for Clinical Applications, 747A
Williams, M. G. See Orsat, B., 1265B
Williams, R. D. See Archambault, J., 930B
Willson, R. C. See Ghurye, G. L., 661B
—; See Pires, M. J., 773B
Wilson, S.-A.
—; Peek, K.; Daniel, R. M.: Immobilization of a Proteinase from the Extremely Thermophilic Organism *Thermus* Rt41A, 225A
—; Daniel, R. M.; Peek, K.: Peptide Synthesis with a Proteinase from the Extremely Thermophilic Organism *Thermus* Rt41A, 337B
Winn, S. R. See Shoichet, M. S., 563A
Winnefeld, A. See Müller, W., 617B
Wongsamuth, R.
—; Doran, P. M.: Foaming and Cell Flotation in Suspended Plant Cell Cultures and the Effect of Chemical Antifoams, 481B
Woo, S. I. See Kim, B. S., 892A
Wood, T. K. See Wu, K., 912B
Wrigley-Jones, C. See Goodacre, R., 1205B
Wu, K.
—; Wood, T. K.: Evaluation of the *hok/sok* Killer Locus for Enhanced Plasmid Stability, 912B
Wu, W.
—; Sidhoum, M.; DeLancey, G. B.: Diffusion of Acetophenone and Phenethyl Alcohol in the Calcium-Alginate–Bakers' Yeast–Hexane System, 1217B
Xie, L.
—; Wang, D. I. C.: Stoichiometric Analysis of Animal Cell Growth and Its Application in Medium Design, 1164A
—; Wang, D. I. C.: Fed-Batch Cultivation of Animal Cells Using Different Medium Design Concepts and Feeding Strategies, 1175A
Xu, Z.-F.
—; Affleck, R.; Wangikar, P.; Suzawa, V.; Dordick, J. S.; Clark, D. S.: Transition State Stabilization of Subtilisins in Organic Media, 515A

Yabannavar, V. M.
—; Singh, V.; Connelly, N. V.: Scaleup of Spinfilter Perfusion Bioreactor for Mammalian Cell Retention, 159A
Yamada, T. See Nohara, D., 276B
Yamagiwa, K.
—; Kobayashi, H.; Onodera, M.; Oŋkawa, A.; Kamiyama, Y.; Tasaka, K.: Surfactant Pretreatment of a Polysulfone Ultrafilter for Reduction of Antifoam Fouling, 301A
Yamane, T. See Nakajima, J., 1193B
Yamazaki, M.
—; Tsuchida, M.; Kobayashi, K.-y.; Takezawa, T.; Mori, Y.: A Novel Method to Prepare Size-Regulated Spheroids Composed of Human Dermal Fibroblasts, 38B
Yanagi, K. See Miyoshi, H., 635A
Yang, F.
—; Russell, A. J.: Two-Step Biocatalytic Conversion of an Ester to an Aldehyde in Reverse Micelles, 232A
Yang, S.-T.
—; Zhu, H.; Li, Y.; Hong, G.: Continuous Propionate Production from Whey Permeate Using a Novel Fibrous Bed Bioreactor, 1124A
Yang, W.-Y. See Lee, C.-J., 309A
—; Lin, C.-D.; Chu, I.-M.; Lee, C.-J.: Extraction of Cephalosporin C from Whole Broth and Separation of Desacetyl Cephalosporin C by Aqueous Two-Phase Partition, 439A
Yang, Y.
—; Jacobs, H.; Bae, Y. H.; Kim, S. W.: Selective Protein Transport Through a Thin Cellulose Coated Porous Membrane, 207A
Yang, Z.
—; Robb, D. A.: Partition Coefficients of Substrates and Products and Solvent Selection for Biocatalysis under Nearly Anhydrous Conditions, 365A
Yarmush, M. L. See Rotem, A., 654A
—; See Foy, B. D., 661A
Yasunishi, A. See Yoshii, H., 57A
Yeh, H.-J. See Lee, C.-J., 309A
Yoo, S.
—; Kim, W.-S.: Cybernetic Model for Synthesis of Poly-β-Hydroxybutyric Acid in *Alcaligenes eutrophus*, 1043A
Yoon, S.-j.
—; Konstantinov, K. B.: Continuous, Real-Time Monitoring of the Oxygen Uptake Rate (OUR) in Animal Cell Bioreactors, 983B
Yoon, S. K.
—; Kang, W. K.; Park, T. H.: Fed-Batch Operation of Recombinant *Escherichia coli* Containing *trp* Promoter with Controlled Specific Growth Rate, 995A
Yoshida, H.
—; Nishihara, H.; Kataoka, T.: Adsorption of BSA on Strongly Basic Chitosan: Equilibria, 1087A
Yoshida, T. See Zhong, J.-J., 649B
Yoshii, H.
—; Furuta, T.; Yasunishi, A.; Kojima, T.: Rapid Renaturation of Denatured and Aggregated Proteins Using Liquid Paraffin as a Pseudolipid Bilayer Membrane, 57A
Yoshioka, S. See Izutsu, K.-i., 1102A
Yu, S.
—; Doran, P. M.: Oxygen Requirements and Mass Transfer in Hairy-Root Culture, 880B
Yu, S.-s. See Tsao, J.-H., 258A

Zakeeruddin, S. M. See Saudan, P., 407B
Zenaitis, M. G.
—; Cooper, D. G.: Antibiotic Production by *Streptomyces aureofaciens* Using Self-Cycling Fermentation, 1331B
Zeng, A.-P.
—; Ross, A.; Biebl, H.; Tag, C.; Günzel, B.; Deckwer, W.-D.: Multiple Product Inhibition and Growth Modeling of *Clostridium butyricum* and *Klebsiella pneumoniae* in Glycerol Fermentation, 902B
—; Byun, T.-G.; Posten, C.; Deckwer, W.-D.: Use of Respiratory Quotient as a Control Parameter for Optimum Oxygen Supply and Scale-up of 2,3-Butanediol Production under Microaerobic Conditions, 1107B
Zhang, M. See Drouet, P., 1075A
Zhang, Q.
—; Reid, J. F.; Litchfield, J. B.; Ren, J.; Chang, S.-W.: A Prototype Neural Network Supervised Control System for *Bacillus thuringiensis* Fermentations, 483A
Zhang, W. Y. See Fett-Neto, A. G., 205B
Zhong, J.-J.
—; Fujiyama, K.; Seki, T.; Yoshida, T.: A Quantitative Analysis of Shear Effects on Cell Suspension and Cell Culture of *Perilla frutescens* in Bioreactors, 649B
Zhou, W.
—; Hu, W.-S.: On-Line Characterization of a Hybridoma Cell Culture Process, 170B
Zhu, H. See Yang, S.-T., 1124A
Zimelka, W. See Müller, W., 617B
Zouboulis, A. I. See Matis, K. A., 354B
Zydney, A. L. See Langsdorf, L. J., 115A
—; See Saksena, S., 960A
—; See Kelly, S. T., 972B
Zygourakis, K. See Lee, Y., 622A

Biotechnology and Bioengineering

Subject Index to Volumes 43 and 44

Please note that A refers to Volume 43 and B refers to Volume 44

α-Amylase production, 1055B
α-Chymotrypsin, 215A, 1031A
α-Keto acids, 1288B
Acceptor site, 856A
Acetate, 521A, 132B
Acetate excretion, 952B
Acetate production, 847A
Acetate reduction, 944B
Acetone, 978A
Acetophenone, 1217B
Acid phase, 7B
Actinomycetes, 1193B
Activated carbon fiber, 429A
Activated killer cells, 685A
Adaptation, 155A
Adaptive control, 95B
Adsorption, 874A, [illegible]37A, 961B, 1064B
Adsorption isotherm, 999B
Aerobic waste water treatment, 595B
Aerosol OT, 529A
AFEX, 1122B
Affinity cross-flow filtration, 55B
Affinity matrix, 321A
Affinity precipitation, 509B
Affinity sorption, 21A
Air pollution, 1279B
Airlift, 69A
Airlift fermentor, 14B
Airlift reactor, 595B, 867B
Ajmalicine production, 461B
Albumin, 960A
Alcaligenes eutrophus, 892A, 1043A, 256B
Alcohol, 1031A, 1306B
Alcohol dehydrogenase, 232A
Alginate beads, 617B
Alginate gel, 183A, 186A
Alkyl β-D-xylosides, 1075A
Amberlite LA-2, 309A
Amino acid fermentation, 453B
Amino acid precipitation, 830B
Amino acids, 275A, 303B, 690B
Ammonia, 434A, 505A, 1175A, 1140B
Ammonium inhibition, 184B
Amperometric glucose biosensor, 262A
Amphiphilic excipients, 1102A
Amphiphilic polyelectrolytes, 849B
Amyloglucosidase, 557B
Amylose, 792B
Anaerobic chemostats, 1040B
Anaerobic digestion, 7B, 1325B
Anaerobic treatment, 469B
Anchorage dependent, 1315B
Anchorage-dependent cells, 90A
Animal cell, 37A
Animal cell culture, 833A, 1164A, 1175A, 1315B
Animal cells, 1089B
Annexin V, 922B
Anthocyanin production, 649B
Antibiotic biosynthesis, 283B
Antibody production, 95B, 753B
Antibody productivity, 1059A, 303B
Antibody purification, 1B, 509B
Antifoam, 481B
Antifoam fouling, 301A
Antigens, 1155B
AOT, 674B
Apiotrichum curvatum, 1228B
Apoptosis, 720B, 1140B
Aquaphilicity, 1265B
Aqueous two-phase partition, 439A
Aqueous two-phase systems, 147B, 445B, 626B
Arsenic inhibition, 357A
Artifacts, 617B
Artificial liver, 635A, 654A, 661A
Artificial neural networks, 397B, 1205B
Artificial organs, 563A
Aspartame precursor, 1108A, 1118A
Aspergillus awamori, 101A
Aspergillus niger, 104B, 112B, 291B
Assay validation, 700A
Atropa belladonna, 481B, 880B
Attachment kinetics, 939A

β-Galactosidase, 147B
β-Galactosidase immobilization, 745B
β-Xylosidase, 1075A
Bacillus, 21B
Bacillus licheniformis, 489B
Bacillus subtilis, 944B, 1007B
Backpropagation, 483A
Backwashing, 1094A
Bacterial adsorption, 667B
Bacterial profile modification, 865A
Bacterial transformation, 490A
Bacterial transport, 489B, 499B
Baculovirus, 881A, 710B
Baculovirus expression system, 349A
Balancing, 3A
Balancing technique, 11A
Batch culture, 753B
Bead cellulose, 286A
Benzene, 1146A, 533B
Benzophenanthridine alkaloids, 14B
Benzyl alcohol, 918A
BHK cells, 939A
Bicarbonate, 1325B
Bicarbonate alkalinity, 1325B
Binary solvent mixtures, 140B
Bioaccumulation, 1362B
Bioactive peptides, 1024A
Bioadhesion, 772A
Bioartificial kidney, 678A
Bioartificial liver, 645A
Bioartificial organs, 654A
Bioartificial pancreas, 673A
Bioassay, 178B
Bioaugmentation, 248B
Biocatalysis in organic media, 365A
Biocatalysis nonaqueous, 1016A
Biochemical basis, 801B
Biocompatibility, 563A
Bioconversion, 699B
Biodegradation, 1146A, 7B, 79B, 1048B
Biodegradation kinetics, 533B
Biofilm, 194B, 219B, 232B, 586B, 595B, 636B, 867B, 1279B
Biofilm formation, 329B
Biofilm reactors, 194B
Biofiltration, 1048B, 1279B
Biohybrid, 563A
Biological variability, 371A
Biomass, 240B, 661B
Biomass measurement, 1168B
Biomass profile, 1153A
Biomass-associated products (BAP), 1040B
Biomaterials, 582A, 781A, 792A
Bioorganic synthesis, 987A
Biopolymers, 186A
Bioprocess, 195A
Bioreactor, 930B, 1288B, 1315B
Bioreactor cultivation, 649B
Bioreactor design, 740A
Bioreactor retrofitting, 1177B
Bioremediation, 521A
Biosensor, 322B, 407B
Bioseparation, 509B
Biosorbable polyglactin mesh, 740A
Biosorption, 186A, 1010A, 354B, 999B
Biosorption of heavy metals, 1001A
Biosorption screening, 1001A
Biospecific adsorption, 286A
Biosurfactant, 661B
Biosurfactants, 801B
Biosynthetic activities, 753B
Biotechnology, 1205B
Biotransformation, 263B
Biphasic oxidation, 918A
Block copolymers, 1031B
Blood ultrafiltration, 678A
Bone, 573A
Bone interstitial fluid flow, 573A
Bone marrow, 609B
Bone marrow culture, 810A
Bone marrow cultures, 734A
Bone mechanics, 586A
Bone remodeling, 573A
Bone-implant interface, 582A
Broth recycle, 1228B
Brown algae, 1001A
BSA, 57A, 1087A
Bubble aeration, 1246B
Bubble breakup, 1089B
Bubble rupture, 37A
Bubbles, 446A
2,3-butanediol, 1107B
Butanol, 978A
Butterfat, 171A

C. butyricum, 902B
Cadmium, 1010A, 354B
Cadmium removal, 1010A

Candida lipolytica, 131A
Candida utilis, 46A
Capacitance, 337A
Carbohydrate metabolism, 104B, 112B
Carbon-13, 563B
Carbon tetrachloride, 521A, 211B
Carbon yield, 847A
Carbonate, 1325B
Cardiac cells, 826A
Carob pod, 189A
Carotenogenesis, 888B
Carotenoids, 888B
Cartilage, 597A
Cartilage regeneration, 605A
Catharanthus roseus, 461B
Cell adhesion, 764A, 792A
Cell aggregation, 555A
Cell clusters, 1131A
Cell culture, 706A, 170B, 205B, 727B, 967B, 983B
Cell cycle, 361B
Cell damage, 37A, 1246B
Cell death, 720B
Cell flotation, 481B
Cell growth, 132B
Cell growth kinetics, 597A
Cell guidance, 792A
Cell harvesting, 539B
Cell locomotion, 622A
Cell population, 138A
Cell recycle, 21B
Cell retention, 159A
Cell shape, 764A
Cell size, 77A
Cell spreading, 764A
Cell transplantation, 543A
Cell transport, 115A
Cell wall disruption, 46A
Cell walls, 297B
Cellobiohydrolase, 961B
Cellobiose, 240B
Cell–polymer interactions, 801A
Cellular automaton, 90A
Cellular energetics, 847A
Cellulase, 381A, 240B, 1064B, 1122B
Cellulomonas fimi, 1295B
Cellulose, 240B
Cellulose hydrolysis, 1064B
Cellulose morphology, 381A
Cephalosporin C, 439A
Ceramic membrane, 1186B
Charge modifications, 147B
Charged fusions, 745B
Chelating agent, 1193B
Chemical modification, 1031A
Chemometrics, 1205B
Chicken hepatocytes, 801A
Chitosan, 1087A, 1083B
Chitosan derivatives, 1018B
Chlorella vulgaris, 1161B
Chloroform, 256B
2-chlorophenol, 79B
CHO cells, 505A, 45B, 1367B
Chondrocyte, 597A
Chromium, 293A
Chymotrypsin, 529A, 73B
Citric acid, 131A, 104B, 112B
Citric acid accumulation, 291B
Classification, 3A
Clathrate hydrate, 215A
Cloned gene, 912B
Cloned proteins, 1367B
Cloning, 944B
Closed loop control, 819B
Clostridium acetobutylicum, 978A
Clostridium thermohydrosulfuricum, 321A
C/N ratio, 329B
Coal, 125B
Collagen, 605A, 781A, 38B
Column sorption, 1010A
Cometabolic transformation, 533B
Competition, 387B
Competitive inhibition, 533B
Complexation, 1031B
Composite membrane, 207A
Concentration effect, 270B
Confocal microscopy, 1131A
Conservation equations, 11A
Contact inhibition, 90A, 622A
Continuous culture, 434A, 471A, 303B, 753B
Continuous glucose monitoring, 262A
Control coefficients, 291B
Copolymer, 1306B
Copper, 183A, 186A
Cortical bone, 586A
Covariance, 411A
Creatinine, 115A
Critical shear rate, 899A
Cross-flow, 270B
Crossflow filtration, 1094A, 539B
Cross-flow membrane filtration, 969A
Cross-flow microfiltration, 1362B
Cross-linkage, 38B
Crosslinking, 1083B
Cross-regulation, 1190A
Cryopreservation, 747A
Crystalline bacterial cell surface layers, 55B
Crystalline surface layers, 321A
^{14}C-tracer experiments, 1040B
Culture conditions, 597A
Culture stability, 275A
Cyanobacterium, 854B, 1255B
Cybernetic model, 1043A
Cyclic AMP regulation, 283B
Cysteamine/cystamine, 66B
Cytochrome P-450$_{cam}$ monooxygenase, 248B
Cytokines, 1023B
Cytometry, 138A

D-amino acid oxidase, 1288B
Data reconciliation, 3A, 11A, 781B
Daucus carota L., 368B
Deactivation, irreversible, 276B
Decontamination, of water, 1132B
Degradation, 165B
Denaturation reversible, 276B
Denitrify, 211B
Depolymerization, 792B
Depth filter perfusion system, 895B
Desacetyl cephalosporin C, 439A
Destruction, 211B
Desulfurization, 125B
Dextran, 865A
Dextransucrase, 856A
Diabetes mellitus, 383B
Dichloromethane, 1048B, 1279B
Differential foam fractionation, 1261B
Differential scanning calorimetry, 859B
Difficidin, 1007B
Diffusion, 183A, 186A
Diffusion limitation, 387B
Diffusional limitations, 597A
Digital imaging, 586A
Digital time-lapse recording, 622A
Disc stack centrifuge, 455A
Disinfection, 429A
Disruption kinetics, 736B
Dissolved oxygen, 461B, 469B, 983B
Dissolved oxygen tension, 1139A, 1007B
Distribution of states, 371A
Disulfide bond, 66B
DNA synthesis, 764A
DNase I, 833A
Dynamic experiments, 419B, 429B
Dynamic model, 710B
Dynamic modeling, 1153A
Dynamic pressure method, 477A

E. coli, 455A
Effect of ethanol on cloned gene expression, 1055B
Electroporation, 490A
Electrostatic interactions, 960A
Elicitation, 14B
Embryogenesis, 930B
Embryos, 368B
Emulsification capacity, 661B
Enantiomers, 690B
Enantioselective esterification, 119B
Enantioselectivity, 64A, 411A, 1265B
Encapsulation, 543A
Endoglucanase, 961B
Endothelial cell metabolism, 615A
Endothelial cells, 622A
Endothelin, 615A
Energy conversion efficiency, 854B
Energy metabolism, 808B
Enzymatic hydrolysis, 523B, 529B
Enzymatic lysis, 46A
Enzymatic synthesis, 1108A, 1118A
Enzyme activities, 461B
Enzyme distribution, 557B
Enzyme immobilization, 225A
Enzyme inactivation, 331A, 1355B
Enzyme kinetics, 411A
Enzyme reactor, 557B
Enzyme stabilization, 682B
Enzyme thermistor, 286A
Enzyme thermostability, 225A
Enzymes, 232A, 946A, 987A
Enzymes in organic solvents, 682B
EPR, 215A
EPR spectra of enzymes, 342A
EPR spectroscopy, 515A
Equilibrium, 1087A
Equilibrium constants, 549B
Error diagnosis, 11A, 781B
Escherichia californica, 14B
Escherichia coli, 275A, 388A, 399A, 429A, 847A, 969A, 29B, 132B, 329B, 379B, 539B, 944B, 952B, 1295B, 1337B

Escherichia coli fermentation, 819B
Escherichia coli microbial reduction, 293A
Eschscholtzia californica, 930B
Esterification, 64A, 497A, 934A, 549B
Estimators, 1168B
Ethanol, 155A, 189A, 978A, 240B, 322B, 429B, 1122B, 1306B
Ethene, 642B
Ethyl cellulose, 73B
Eutectic mixtures, 1016A, 1024A
Ex vivo expansion, 609B
Expanded bed adsorption, 922B
Experimental design, 397B
Expression plasmid, 1074B
External loop airlift, 1115B
Extracellular activity, 423A
Extracellular biopolymer, 219B, 232B
Extracellular matrix, 543A, 555A
Extracellular polysaccharide, 329B
Extraction, 529A, 907A, 674B
Extraction from whole broth, 439A
Extraction, rIL-2, 969A
Extractive fermentation, 445B
Extravascular devices, 673A

Fabric, 781A
Facilitated transport, 907A
Fatty acid esters of PEG, 445B
Fatty acids, 497A
Fed batch, 978A, 808B, 819B, 1099B
Fed-batch, 1175A, 727B
Fed-batch culture, 189A, 892A, 95B
Fed-batch fermentation, 314A
Fed-batch operation, 995A
Feedback control, 314A
Feeding strategy, 1164A
Fermentation, 314A, 483A, 913A, 978A, 21B, 87B, 165B, 240B, 322B, 539B, 1099B, 1228B, 1271B
Fermentation, self cycling, 1331B
Fermentations, 801B
Fermentor broths, 1205B
Fermentor, airlift, 69A
Fermentor, large, 1177B
Fiber, 781A
3T3 fibroblast, 801A
Fibrous bioreactor, 1124A
Filter clogging, 159A
Filter feeding, 371A
Filtering culture, 1186B
Filtering technique, 781B
Filtration, 833A
Flotation, 125B, 354B
Flow cytometry, 371A, 361B
Fluid shear stress, 573A
Fluidization, 922B
Fluorescence lifetime, 1139A
Flux enhancement, 301A
Foam fractionation, 1261B
Foam reduction, 1246B
Foaming, 481B, 801B
Fouling, 833A, 1186B
FPLC, 1064B
Freeze-drying, 1102A
Freeze-thawing, 1102A
Fusion proteins, 1295B, 1348B
Fuzzy control system, 87B
Fuzzy controller, 1055B

Galactosidase, 1348B
Gas-lift reactor, 586B
Gas–medium interface, 37A
Gel immobilization, 1362B
Gene expression, 242A
Gene therapy, 925A
Genetic control, 399A
Genetic engineering, 147B
Genetic regulation, 242A
Germination, 699B
Glucoamylase, 101A
Glucose, 95B, 1255B
Glucose oxidase, 407B
Glucose uptake, 952B
Glutamate dehydrogenase, 1018B
Glutamic acid, 87B
Glutamine, 95B
Glycerol, 1255B
Glycerol fermentation, 902B
Glycidol, 119B
Glycine betaine, 991B
Glycogen, 132B, 837B
Glycolysis, 291B
Glycoprotein, 66B
Glycosaminoglycan, 605A
Glycosidase, 423A
Glycosylation, 505A, 727B
Granular activated carbon, 642B
Granular sludge bed, 469B
Granulation, 586B
Grating coupler, 939A
Gross error detection, 11A
Growth factors, 622A
Growth inhibition, 434A
Growth kinetics, 154B, 667B
Growth modeling, 902B
Growth rate, 808B
Growth rate, controlled, 995A

Hairy roots, 880B
Halocarbon degradation, 248B
Haptotaxis, 792A
HCH-1 model, 1122B
Heat inactivation kinetics, 107A
Hematopoiesis, 609B
Hematopoietic cells, 706A
Hematopoietic progenitor cells, 734A
Hepatitis A, 1315B
Hepatocyte, 661A
Hepatocytes, 635A, 645A, 654A, 801A
Heterogeneity, 194B
Hexavalent chromium, 471A
High cell density culture, 892A
High density culture, 461B
Hok/sok locus, 912B
Hollow fiber bioreactor, 563B
Homogenization theory, 586A
Homogenization, high-pressure, 46A
Horseradish peroxidase purification, 674B
Human dermal replacement, 740A
Human Hepatoma (HepG2) cells, 1199B
Hybrid strain, 1146A
Hybridoma, 434A, 1175A, 95B, 361B, 753B, 1099B, 1140B, 1235B, 1246B
Hybridoma cells, 446A, 720B, 991B, 1155B
Hybridoma culture, 77A, 895B
Hybridoma metabolism, 303B, 563B
Hydrodynamics, 69A, 636B
Hydrofoils, 1177B
Hydrogen photoproduction, 1255B
Hydrogen production, 854B
Hydrogen sulphide toxicity, 586B
Hydrogenase, 258A
Hydrolytic efficiency, 961B
Hydrophilicity, 1265B
Hydrophobic affinity partitioning, 445B
Hydrophobic interaction chromatography, 626B
Hydrophobic support, 171A
Hyperosmotic stress, 77A, 991B
Hyphal fragmentation, 655B

IgG purification, 55B
IgG-mRNA, 753B
Image analysis, 165A, 622A, 368B, 655B
Immiscible organic solvents, 1355B
Immobilization, 321A, 635A, 934A, 79B
Immobilized cell, 1124A
Immobilized cells, 1153A
Immobilized enzyme, 497A, 1108A, 1118A, 1265B
Immobilized invertase, 286A
Immobilized membranes, 178B
Immobilized metal ion affinity chromatography, 349A
Immobilized whole cells, 918A
Immune activation, 700A
Immunoglobulins, 960A
Immunoisolation, 673A
Immunomicrospheres, 1B
Immunotherapy, 685A, 693A, 700A
Implant, 207A
Inclusion bodies, 969A
Inclusion body, 455A
Infectious bursal disease virus, 349A
Inhibition, 155A, 1168B, 1228B
Insect cell, 37A
Insect cells, 710B
Insulin, 383B
Integrated optics, 939A
Interesterification, 122A, 171A
Interfacial area, 331A, 1355B
Interleukin-2, 685A
Intracellular, 563B
Invertase, 557B
Ion exchange, 1087A, 745B
Ion exchange resin, 999B
Ionic strength, 1052A
Islet of Langerhans, 383B
Islet transplantation, 673A

K. pneumoniae, 902B
Kalman filter, 1271B
Kidney, 678A
Kil gene, 1074B
Kinetic, 849B
Kinetic model, 856A, 211B
Kinetic modeling, 1040B
Kinetic properties, 286A
Kinetic resolution, 411A
Kinetics, 101A, 267A, 293A, 461A, 865A, 1081A, 194B, 263B, 276B, 368B, 808B, 859B, 930B

Klebsiella oxytoca, 240B

Lac-based promoters, 399A
Lactate, 1175A, 1140B
Lactate dehydrogenase, 1102A
Lactic acid, 907A, 913A
Lactic acid bacteria, 1168B
Lactobacillus helveticus, 888B
Langmuir–Blodgett films, 849B
Laser turbidity probe, 170B
Latex particles, thermo-sensitive, 1B
Layer thickness, 387B
Lead biosorption, 1001A
Lead-microbe interaction, 232B
Leuconostoc mesenteroides, 865A
Leucrose formation, 856A
Light-emitting diodes (LED), 1161B
Lignin peroxidase, 79B
Lignocellulose, 240B, 1122B
Lignocellulose hydrolysate, 322B
Linear constraints, 11A
Linear optimization, 275A
Lipase, 64A, 122A, 171A, 497A, 119B, 549B
Liquid chromatography, 322B
Liquid membrane, 907A
Liquid paraffin, 57A
Liquid–liquid extraction, 773B
Liver cell culture, 810A
Liver failure, 645A
Log *P*, 365A
Long-term culture, 635A
Lymphocyte therapy, 693A
Lymphokine-activated killing, 685A
Lyophilized proteins, 140B
Lysate, 423A
Lysozyme, 140B

Macroencapsulation, 673A
Macronutrients, 930B
Macroporous microcarriers, 826A
Magnetic resonance, 661A
Mammalian cell culture, 29B, 184B
Mammalian cell damage, 899A
Mammalian cells, 423A
Mass spectrometer, 892A
Mass spectrometry, 149A
Mass transfer, 122A, 586B
Mass transfer coefficient, 477A
Mass transport, 636B
Materials balancing, 1099B
Mathematical modeling, 419B
Matrix proteins, 740A
Mean motor unit maximum force, 757A
Measurement error detection, 781B
Media, 165B
Mediator, 407B
Medium design, 1164A, 1175A
Melanotransferrin, human, 45B
Membrane bioreactor, 899A
Membrane bioreactors, two-phase, 765B
Membrane filtration, 960A
Membrane fouling, 972B
Membrane inlet mass spectrometry (MIMS), 347B
Membrane separation, 301A
Membrane transport, 115A
Membrane wettability, 765B
Membrane-fixed enzymes, 557B
Mercury adsorption, 999B
Metabolic control analysis, 291B
Metabolic engineering, 275A
Metabolic flux regulation, 1190A
Metabolic fluxes, 275A, 1059A
Metabolic model, 461A
Metabolic modeling, 1059A
Metabolic models, 837B
Metabolic switch, 1190A
Metabolism, 1059A
Metabolism, secondary, 649B
Metal binding, 297B
Metal chelate, 21A
Metal toxicity, 232B
Metal uptake, 1001A
Metals, 874A
Methane production, 258A
Methanococcus jannaschii, 258A
Methanogenic bacteria, 387B
Methyl ketone, 699B
Methylene chloride, 1048B
Micellar-enhanced ultrafiltration, 690B
Microaerobic culture, 1107B
Microaerobic fermentation, 419B, 429B
Microalgae fermentation, 314A
Microbeads, 867B
Microbial attachment/detachment, 219B
Microbial fermentation control, 483A
Microbial lipid, 1228B
Microbial reduction, 471A
Microbial souring, 267A, 263B
Microcarrier culture, 90A
Microcarriers, porous, 45B
Microdialysis, 322B
Microelectrodes, 1131A
Microemulsions, 946A
Microencapsulation, 673A, 734A
Microfiltration, 1094A, 270B, 972B
Microneurovascular repair, 757A
Microporous membrane, 21A
Mixed culture, 661B
Modeling, 194B
Molasses, 1094A, 661B
Monoamine oxidase, 849B
Monoclonal antibodies, 991B
Monoclonal antibody, 700A, 727B, 1235B
Monoclonal antibody production, 895B, 1155B
Monoclonal antibody productivity, 361B
Monocytes, 685A
Monod kinetics, 357A
Morphology, 368B, 655B, 1337B
Motor unit number, 757A
Mouse Ltk$^-$ cells, 925A
MRC-5, 1315B
Multifactorial optimization, 490A
Multiplicity of infection, 710B
Multirate systems, 1271B
Muscle atrophy, 757A
Mushroom tyrosinase, 365A
Myeloma, 1140B
Myoglobin, 57A
Myotubes, 826A

N-acetylglucosamine derivatized polystyrene, 801A
NAD(P)H fluorescence, 453B
Naproxen, 64A
Natural killer cells, 685A
Near-infrared spectroscopy, 913A
Neonatal dermal fibroblasts, 740A
Nerve regeneration, 543A
Network topology design, 483A
Neural network simulation, 483A
Neurite, 555A
Neurons, 826A
Nickel biosorption, 1001A
N-isopropyl-acrylamide, 1B
Nitrate, 521A
Nitrification, 1153A
Nitrobacter, 1153A
Nitrogen-fixing strain, 854B
Nitrosomonas, 1153A
NMR, 1059A, 563B
Nonaqueous enzymology, 934A
Nonaqueous solvents, 119B, 140B
Nonionic surfactant, 301A
Nonionic surfactants, 946A
Non-Newtonian media, 1115B
Nuclear magnetic resonance, 1059A
Nuclease, 276B
Nucleotides, 1235B
Nutrient concentration, 461B
Nutrient deprivation, 1140B
Nutrients, 154B

Observability, 3A
Oil reservoir, 263B
Olive oil, 171A
On-line, 337A, 322B
On-line glucose analyzer, 892A
On-line glucose–ethanol analyzer, 1055B
On-line HPLC, 819B
On-line measurements, 170B
On-line monitoring, 913A, 347B, 429B, 453B, 1325B
Optimization, 112B
Organic acids, 907A
Organic media, 1081A
Organic solvent, 918A
Organic solvents, 232A, 331A, 342A, 515A, 529A, 1265B
Organophosphorus hydrolase, 946A
Osmium, 407B
Osmoprotective compounds, 77A
Osmotic pressure, 165A
Osteoblasts, 573A, 582A
Osteocyte lacunae, 586A
Overflow metabolism, 808B
Oxidizing agent, 66B
Oxydifficidin, 1007B
Oxygen, 275A, 654A
Oxygen absorption, 477A
Oxygen electrode, 262A
Oxygen evolution, 178B
Oxygen limitation, 419B, 429B
Oxygen mass transfer, 880B
Oxygen measurement, 1139A
Oxygen microprobe, 617B
Oxygen production, 1161B
Oxygen profiles, 617B
Oxygen supply, 1107B
Oxygen transfer, 131A, 1115B, 1246B
Oxygen-transfer coefficient, 149A
Oxygen transfer rate, 1186B

Oxygen uptake, 131A
Oxygen uptake rate, 983B

ζ-Potential, 354B
Packed-bed reactor, 635A
PAGE, 29B
Particle tracking, 636B
Particulates, 867B
Partition coefficients of substrate and product, 365A
Partition of proteins, 1052A
Partitioning, 147B
Pattern recognition, 368B
PEG coating, 383B
Penicillin, 165B
Penicillin acylase, 379B
Penicillin fermentation, 347B
Penicillin G, 309A
Penicillium chrysogenum, 655B
Penicillium roquefortii, 699B
Peptide synthesis, 1016A, 1024A, 1031A, 1108A, 1118A, 337B
Peptides, 772A, 523B, 529B
Perforated plate, 1115B
Perfusion, 159A, 661A, 833A; 881A
Perfusion culture, 361B, 609B, 895B
Perilla frutescens, 649B
Periplasmic proteins, release, 1074B
Permeability, 115A
Permselectivity, 207A
Pervaporation, 978A
PGK promoter, 1055B
pH, 505A, 1052A
Phanerochaete chrysosporium, 79B
Phase modulation fluorometry, 1139A
Phase partition, 626B
PHB, 1337B
PHB recovery, 256B
Phenethyl alcohol, 1217B
Phenols, 1132B
Phenoxyacetic acid, 347B
Phenylacetic acid, 309A
Phorbol myristate acetate, 700A
Phospholipase D, 1193B
Phospholipids, 1193B
Phospholipids, ligand-modified, 509B
Phosphorus removal, 461A, 837B
Phosphotriesterase, 946A
Photobioreactor (PBR), 1161B
Photolithography, 764A
Photosynthesis, 178B
Physiological state, 371A
Phytotoxicity, 178B
Pichia pastoris, 918A
Pilot-plant fermentor, 477A
Pl promoter, 1074B
Placental lactogen, 505A
Planar waveguide, 939A
Plant cell culture, 649B
Plant cell cultures, 481B
Plant materials, 1132B
Plant tissue culture, 880B
Plasmid, 1337B
Plasmid retention, 329B
Plasmid stability, 912B
Plasmid vector, 1348B
Pluronic F68, 446A
400-μm Polyacrylate microcapsules, 1199B
Poly(ethylene glycol), 772A, 73B
Poly(3-hydroxybutyrate), 256B
Poly(3-hydroxybutyrate-*co*-3-hydroxyoxyvalerate), 1306B
Poly(3-hydroxybutyric acid), 892A, 1337B
Polyampholytes, 1031B
Poly-β-hydroxybutyrate, 837B
Poly-β-hydroxybutyric acid, 1043A
Polyglycolic acid, 605A
Polymer networks, 772A
Polymer, temperature-responsive, 38B
Polymers, 543A, 987A, 73B, 79B, 297B, 792B
Polyols and carbohydrates, 107A
Polyphosphate, 837B
Polysaccharides, 792B
Po_2-microelectrode, 617B
Pores, 381A, 1131A
Porous media, 267A, 263B, 489B, 499B
Porous resin, 635A
Power dissipation, 899A
Precipitation, 874A
Pretreatment, 301A
Pristinamycins, 445B
Process control, 170B
Process optimization, 397B
Product inhibition, 902B
Programmed cell death, 1140B
Progress curve, 411A
1,3-propanediol, 902B
Propanol, 1306B
Propionibacterium acidipropionici, 1124A
Propionic acid fermentation, 1124A
Prostacyclin, 615A
Protease, 258A
Proteases, 1024A, 523B, 529B
Protein, 1122B
Proteinase, 225A, 337B
Protein A, 321A, 55B
Protein aggregation, 972B
Protein disulfide isomerase, 66B
Protein engineering, 773B
Protein extraction, 529A, 379B
Protein folding, 66B
Protein fractionation, 21A
Protein free, 833A
Protein mobility, 342A
Protein precipitation, 830B
Protein production, 45B
Protein production, recombinant, 952B
Protein purification, 349A, 626B, 1261B
Protein renaturation, 57A
Proteins, 1031B
Protein separation, 960A, 972B, 1031B
Protein solubility, 140B
Protein thermostability, 107A, 859B
Proteins, contaminant, 29B
Pseudomonas aeruginosa, 999B
Pseudomonas putida 3SK, 437B
Pseudomonas sp., 471A
p-xylene, 1146A, 533B
Pyrite, 125B
Pyrite/arsenopyrite leaching, 357A
Pyrolysis mass spectrometry, 1205B
Pyruvate, 1255B

Radial dispersion model, 21A
Reactor comparison and scale-up, 1107B
Reagent partitioning, 918A
Rechargeable sensor, 262A
Recombinant cells, 736B
Recombinant *E. coli*, 995A
Recombinant fermentations, 397B
Recombinant human growth hormone, 925A
Recombinant protein expression, 505A
Recombinant proteins, 881A
Recombinant *Saccharomyces cerevisiae*, 1055B
Red blood cells, 115A
Redundancy, 3A
Regenerated cellulose, 207A
Regression analysis, 1205B
Renal cell carcinoma, 693A, 700A
Response surface methodology, 1031A
Retention culture, 1186B
Reverse hydrolysis, 1075A
Reverse micelles, 232A, 1031A, 674B, 773B, 830B
Reversed micelle, 215A
Reversed micelle systems, 1052A
Reversed micelles, 342A, 946A
Rhizomucor miehei lipase, 934A
Rhodotorula glutinis, 888B
Ribonuclease, 57A
Ribosome synthesis, 388A
RNA polymerase, 242A
rpoBG, 242A
RQ control, 1107B
Rushton turbines, 1013B

Saccharomyces cerevisiae, 101A, 189A, 1094A, 29B, 617B, 736B, 1083B, 1362B
Sampling, 322B
Scaleup, 159A, 195A
Screen fouling, 159A
Screening of Con A conjugates, 286A
Seaweeds, 1001A
Secondary metabolism, 283B
Segregated model, 138A
Selectivity, 1193B
Sensitivity analysis, 112B
Separation, 439A
Separation process, 309A
Septic shock syndrome, 1023B
Serum-free media, 706A
Serum-free medium, 747A
Sf-9 insect cells, 881A
Shear effects, 649B
Silica, 1023B
Skin equivalent, 747A
S-layers, 55B
Sludge, 874A
Sludge hold-up, 469B
Sludge, primary, 7B
Sodium hypochlorite, 256B
Software sensors, 1168B
Solid substrate, 667B
Solids retention time, 7B, 867B
Solid-state enzymes, 682B
Solubility, 1081A
Solubility of oxygen, 149A
Solubilization, 529A
Soluble microbial products (SMP), 1040B
Solvation, 1081A
Solvent-free systems, 122A
Somatic embryos, 930B

Sorption, 874A
Specific rates, 170B
Spheroid, 38B
Spin coating, 207A
Spinfilter, 159A
Spongiococcum exetricicum, 314A
Spores, 699B
Spreading kinetics, 939A
Stability analysis, 104B
Stabilization, 1102A
Starvation, 371A
State estimation, 1271B
Static mixer, 1315B
Stem cells, 609B
Stereoselectivity, 690B
Stirred tank, 195A
Stirred tank bioreactors, 1013B
Stoichiometric analysis, 1164A
Stoichiometry, 267A, 461A, 837B
Strain, 615A
Streptavidin, 1348B
Streptococcus thermophilus, 490A
Streptokinase, 270B
Streptomyces aureofaciens, 1331B
Streptomycetes, 354B
Stress, 1089B
Stromal cells, 810A
Structure, 194B
Structured mixing model, 195A
Structured models, 219B, 232B
Subclone, 753B
Substrata, grooved, 764A
Substrate limitation, 808B
Substrates, 154B
Subtilisin, 515A, 1016A, 1081A, 1265B
*SUC*2 promoter, 1055B
Sucrose, 276B
Sulfate reducing bacteria, 387B
Sulfate reduction, 267A, 263B
Sulfhydryl reactions, 972B
Sulfur, 667B
Sulphate-reducing bacteria, 586B
Supercritical carbon dioxide, 497A
Surface area, 381A
Surface chemistry, 792A
Surface modification, 563A
Surface morphology, 764A
Surface tension, 661B
Surfactant, 407B
Surfactant adsorption, 765B
Suspension culture, 303B, 710B
Sweat gland, 747A
Synechococcus sp., 854B, 1255B
Synergism, 1064B

T cells, 693A
T4 lysozyme, 147B
Tangential filtration, 881A
Taxol production, 205B, 967B
Taxus cuspidata, 205B, 967B
Temperature, 1235B
Tenotomy and repair, 757A
Tetracycline production, 1331B
Tetrahymena pyriformis, 371A
Thermal deactivation, 682B
Thermodynamics, 1081A
Thermolysin, 1108A, 1118A
Thermophilic ethanol fermentation, 21B
Thermostability, 101A
Thermus, 225A, 337B
Thiobacillus ferrooxidans, 357A, 125B, 667B
Time of infection, 710B
Time–temperature integrators, 859B
Tissue engineering, 597A, 605A, 740A, 747A, 781A, 792A
Tissue plasminogen activator, 615A
Toluene, 1146A, 533B
Toxicity removal, 1010A
Trabecular bone, 586A
Transcriptional regulation, 242A
Transglycosylation, 1075A
Transition state stabilization, 515A
Transition time, 291B
Translational regulation, 242A
Transphosphatidylation, 1193B
Transplantation, 747A, 925A
Transport phenomena, 267A
Transposition, 757A
Trichoderma reesei, 1064B
Trickle column, 1010A
Trickling filter, 1279B
Triglyceride hydrolysis, 437B
trp promoter, 995A
Two-phase system, 437B
Tylosin, 283B

UASB granule, 387B
UDP-*N*-acetylgalactosamine, 184B
UDP-*N*-acetylglucosamine, 184B
Urease, 331A
Uric acid, 115A
Utilization-associated products (UAP), 1040B

Vacuolation, 655B
VHb hemoglobin, 1367B
Viable biomass, 337A
Virus-like particles, 736B
Viscosity, 922B
Visualization chamber, 165A
Vitamins, 303B
Volatile fatty acids, 7B
Volatile organic compounds, 642B

Waste gas, 1279B
Waste gas treatment, 642B
Waste water, 595B
Wastewater treatment, 1010A
Wastewater, low-strength soluble, 469B
Water activity, 365A
Water activity control, 549B
Water disinfection, 429A
Water reuse, 1228B
Whey, 888B
Whey hydrolysis, 745B
Whey proteins, 523B, 529B
White-rot fungus, 79B

Xylose, 429B

Yeast, 155A, 165A, 337A, 297B, 888B
Yeast immobilization, 1083B
Yeast–water–hexane system, 1217B

Zymomonas, 155A